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MANHATTAN TO MISSILES: CANADA, NUCLEAR WEAPONS AND INTERNATIONAL LAW

(AN INTERDISCIPLINARY STUDY)

by

© BRIAN MICHAEL MAZER

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF LAWS

FACULTY OF LAW

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SPRING, 1977

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

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Date 7th April 1977 .....

DEDICATED TO MY PARENTS:

TO MY MOTHER AND TO THE MEMORY OF MY FATHER.

ABSTRACT

The nuclear age befell the world during a period of great devastation and loss of life. This new and terrifying capability was utilized to bring an end to World War II, but this instrument of peace was expensive in terms of human misery. Although the stories of the Manhattan project and the atomic bombs dropped on Hiroshima and Nagasaki have been widely told, it is not common knowledge that Canada was instrumental in bestowing the "atom" upon civilization. Nor is it common knowledge that this first contribution precipitated further Canadian involvement in nuclear weapons, both as an effort to employ the weapons for "defensive" military purposes and as an effort to prevent any future military use of the powerful atom. The purpose of this thesis is to examine the Canadian involvement with nuclear weapons from an international law perspective.

It is valuable to examine the role Canada played in the early development of nuclear weapons because that resulted in a new status accorded this country. The result was various new commitments and activities in which Canada contributed to the growth and development of the current state of nuclear weaponry and energy. Although Canada's major efforts have been in the peaceful uses of nuclear energy it has been involved significantly with nuclear weapons.

Canada became committed to a nuclear weapon role as a part of its defence alliances NATO and NORAD. How and why this country became a "quasi" nuclear weapon state and the

terms of those commitments are important in order to understand and appreciate the 1963 nuclear weapon controversy, which caused the downfall of the Diefenbaker government. The events of that crisis in Canadian political history raise questions of international legal significance. Much was stated regarding whether there was a legal commitment on Canada's part to accept nuclear warheads, and the issue was never really settled because of the intervention of the 1963 election and subsequent acceptance of the warheads.

Canada obtained a nuclear weapon capability of sorts in 1963 but that has changed significantly since then. Canada's current nuclear status is interesting especially in the perspective of the current defence priorities. Canada has retained a part of its nuclear status, while at the same time reevaluated its entire defence system.

Disarmament has, all along, been a most important activity for Canada. The ability to participate and contribute to the disarmament discussions has, to a large extent, evolved from Canada's early nuclear role. The Canadian commitment to the concept and reality of disarmament is evidenced by the number of international treaties to which it has contributed and become a party.

However there is an incongruity which becomes apparent after an examination of Canada and nuclear weapons, and which does not bear simple solution. While maintaining an active part in the use or potential use of nuclear weapons in a military situation, Canada has been one of the most active and vocal advocates of nuclear disarmament. It will not be easy to solve this dilemma.

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I am fortunate to have had joint supervisors to guide me in this thesis. Professor Clayton Rice provided valuable advice for both the content and structure that my work has taken. The great amount of time he devoted to discussing areas of concern with me was far above what was expected of him. His humour and good nature made the time spent on this thesis extraordinarily pleasurable. For all he did, I express my sincerest appreciation. Dr. S. P. Khetarpal, Professor of Law and Director of Graduate Studies, who also served as supervisor, was of great assistance in providing me with advice and encouragement. I thank Dr. Khetarpal for giving me the benefit of his knowledge and experience and for having faith in me.

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The Faculty of Law, University of Alberta deserves mention. I express my gratitude for the tremendous assistance which has been accorded me.

If there were an award for efficiency and expertise, Mrs. Rosemary Robertson would surely win it for the expert typing of my thesis. I thank her for the job well done. Ms. C. A. Kent took a significant amount of time off from her law studies to assist me in the proof-reading of this thesis. I appreciate the time and effort.

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Within a few days at the latest the power of the atomic bomb will be disclosed and with it Japan will be faced with either immediate complete surrender or complete devastation within a very short time. It is well that the world itself is being prepared for the revelation which the knowledge of the existence of this new weapon will disclose. I feel that we are approaching a moment of terror to mankind, for it means that, under the stress of war, men have at last not only found but created the Frankenstein which conceivably could destroy the human race. It will rest with those in authority to decide how it can later be brought to serve instead of destroy mankind. This responsibility is one of the many that comes upon those who will from now on continue to exercise authority in government in the different nations.

The Mackenzie King Record Volume 2
July 27, 1945
Page 447-448.

CHAPTER I

INTRODUCTION

May 18, 1974 must be considered as one of the most dramatic days in the history of Canada's nuclear involvement. In fact the repercussions of the event of the day on the entire nuclear world cannot be overestimated. May 18, 1974 was the date that India conducted its first nuclear explosion. This was not a unique event in the sense that five countries, the United States, the Soviet Union, Great Britain, France and China, had previously conducted nuclear explosions. However the implications of the Indian actions are most important for several reasons.

India was the first country to "go nuclear" which is not one of the world's great powers. The evidence of this fact is simple. All the previous nuclear explosions were carried out by the five nations, who felt the need to develop a nuclear explosive capability for security and are the same five nations who are the permanent members of the United Nations Security Council. Clearly India may have conducted the explosion for security and military purposes, but the public explanation for the action was that the explosion was purely for peaceful purposes.

Another unique aspect of the Indian nuclear explosion is the fact that India has declared the express purpose of the experiment was unequivocally for peaceful purposes. There have been various suggestions in the past that nuclear

explosions could be employed for peaceful uses.[1] However it seems that this proposal has been shelved, at least for the time being. All the other states possessing nuclear explosive devices have undertaken the program for military purposes. Perhaps these two factors, along with India's strategic situation with regard to China and Pakistan, lend credence to the suggestion that India, too, conducted the explosion for military purposes, although the professed reasons are different.

Perhaps the most important aspect of the nuclear detonation by India, especially as it concerns Canada, is the fact that the nuclear explosion was developed as a result of a program for the peaceful uses of nuclear energy. The Indian action became possible because of the information, technology and material, made available to it by way of a nuclear reactor supplied to that country by Canada. The broad implications of this development are staggering when it is borne in mind that there are an increasing number of nuclear reactors being supplied to states which do not have a nuclear explosive capability at this time.

The Indian explosion is especially relevant to Canada. Since Canada supplied India with the CIRUS reactor and natural

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[1] The most ambitious of these proposals was the "Plowshare Project". In addition, the possibility that nuclear explosions may have a peaceful application has been considered and dealt with in the Treaty on the Non-Proliferation of Nuclear Weapons, Canada Treaty Series, 1970/7. Article V provides that any potential benefits to be derived from peaceful nuclear explosions should be made available to non-nuclear-weapon states under some form of international supervision.

uranium fuel for it, from which the plutonium was produced and later reprocessed in order to develop the nuclear explosive capability,[2] there has been a great concern expressed regarding Canada's responsibility for this horizontal proliferation[3] of nuclear weapon capabilities. There is little question of Canada's legal responsibility but the incident created a moral dilemma which has resulted in a great deal of controversy.

Canada has been consistently opposed to nuclear proliferation and has contributed much to the cause of disarmament in the past thirty years. However since the Indian explosion and the concerns about other dangers of nuclear energy, there has been considerable criticism of Canadian policy with regard to nuclear reactors. This criticism has been directed at Canada even though this country has the toughest safeguard policy in the world regarding nuclear reactors.[4]

The concern about proliferation of nuclear weapon capability through the sale of nuclear reactors is applicable to the Canadian situation, not only with regard to the events

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[2]Epstein, "Canada and the Problem of Nuclear Proliferation", (unpublished) 5.

[3]Horizontal nuclear proliferation refers to the increase in the number of states possessing nuclear weapons. This is the type of nuclear proliferation dealt with in the Non-Proliferation Treaty, to which Canada is a party.

[4]See generally, Knelman, Nuclear Energy--The Unforgiving Technology, (1976) and Epstein, supra, n. 2.

in India. Canada has also provided or agreed to provide nuclear reactors to Pakistan, South Korea, Argentina and Taiwan.[5] With the exceptions of the Middle East and Southeast Asia it is difficult to envisage any other areas of the world which are more potentially volatile than those mentioned; and Canada is supplying states in those places with nuclear reactors.[6]

This problem, regarding nuclear energy and the indirect effects it is having on nuclear weapons, is becoming of increasing concern to Canadians. Much debate has been taking place in the past few years and undoubtedly more will result as the issue of nuclear energy attains a "center-stage" position in the minds of policy-makers, academics and media personnel. This trend is evidenced by the fact that two books have been published in the past year on this topic.[7]

Nuclear energy is only one aspect of the extremely important question of the nuclear age. Since the first and only nuclear weapons, ever employed in the history of warfare, were dropped on Hiroshima and Nagasaki, the consequences which have beset international law and politics have been tremendous. The mere possibility of the use of nuclear weapons once

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[5] McIntyre, "Natural-Uranium Heavy-Water Reactors", (1975) 233 Scientific American 24; Epstein, supra, n. 2, 40.

[6] Epstein, supra, n. 2, 40-41. The concern is magnified by the fact that three of the states receiving Canadian nuclear reactors, India, Pakistan and Argentina, are not parties to the Non-Proliferation Treaty.

[7] Knelman, supra, n. 4; Epstein, The Last Chance, (1976).

again has served to change attitudes and priorities in the international world. Although the Charter of the United Nations enunciates as its first purpose "to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind . . .",[8] it is enlightening to realize that at the time of the San Francisco Conference, few people there knew of the new weapons[9] and since the nuclear weapons had not been utilized, with the exception of testing, no one had yet comprehended the devastation and military significance. However it is clear that once the world began to realize that a new age had been discovered, the effects of which were revolutionary to the entire traditional practices of international conduct, there was immediate and grave concern regarding the future of nuclear energy. One of the first actions of the United Nations General Assembly in its initial session was to call for international control of atomic energy and the elimination of atomic weapons.[10]

The effects of the advent of the nuclear weapon on society cannot be overstated. There can be no doubt that nuclear weapons have radically altered the concept, strategy and practice of warfare. The changes which have occurred are not simply amendments of existing thought on the topic,

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[8] Dupuy and Hammerman, A Documentary History of Arms Control and Disarmament, 289 (1973).

[9] Id., at 288.

[10] Id., at 291.

but rather are completely new and different in kind.

> Old concepts, and old definitions, of strategy have become not only obsolete, but nonsensical with the development of nuclear weapons. . . . To aim at winning a war, to take victory as your object, is no more than a state of lunacy.[11]

The concern over some type of universal agreement on the control of nuclear weapons in order to reduce the risk of an outbreak of nuclear warfare, which could threaten the very existence of mankind, has resulted in numerous and varied attempts at disarmament and arms limitation. This area has achieved such stature as to have become almost a discipline itself, within the studies of international law and international relations.

The study of nuclear weapons as a topic within the parameters of international law is important both for the purposes of the treaties which have been entered into and the functioning and effects the international agencies and the treaties have on the wide spectrum of international intercourse. There can be little doubt that the decentralizing effect that continued proliferation of nuclear weapons could have on the balance of power is of great concern to most of the nations of the world. The concern about nuclear weapons has superceded, to an extent, the political gamesmanship[12] which has been a constant factor in disarmament talks. The

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[11] Hart, Deterrent or Defence, 66 (1960).

[12] See Generally Spanier and Nogee, The Politics of Disarmament, (1962).

possibility of terrorist blackmail based on the possession of nuclear weapons is a scenario not too far removed from reality and therefore is of grave concern to all nations who may be threatened by such terrorist actions.

Although the topic of nuclear weapons has to an extent taken a 'back seat' to the dangers and problems of the peaceful uses of nuclear energy in the public view, it cannot be treated as an issue which needs little, or any, further examination. It is for this reason that this thesis will examine Canada's role with regard to nuclear weapons from an international law perspective.

When the topic of Canada and nuclear weapons is mentioned, the typical response is one of disbelief that there would be anything to discuss. Although this is a fallacy, it is clearly an important justification for any study of the Canadian involvement with nuclear weapons. Canada has been a 'silent partner' in the development of nuclear energy for military purposes and its role has obviously been overshadowed by the endeavours of such states as the Soviet Union and the United States. However Canada has been a part of the creation and maintenance of the 'balance of terror' and for that reason alone there is reason for studying the actions and accompanying implications.

Domestically, nuclear weapons created a significant controversy in the early 1960's. This political crisis caused the defeat of a Canadian government. The concern and publicity of the nuclear weapon controversy was, at the time, great but since then has not been on the minds of

Canadians.

Nuclear weapons, and their proliferation, is one of the most serious problems facing the world today. It is most important that Canada's role and commitment in this area of international law be examined. Unless one can obtain an appreciation of the history and current direction a state's policy and legal commitments are leading to, one cannot understand or begin to deal with the grave and complex problem of nuclear weapons; a problem which has the capability of destroying our entire existence.

CHAPTER II

THE HISTORY OF THE DEVELOPMENT OF NUCLEAR WEAPONS

Canada was one of three countries, whose governments and scientists embarked together on the gigantic, years-long gamble, the best kept secret of the war, which resulted in the manufacture of the atomic bomb from materials mined in Canada and made available to the United States for the purpose.

An official statement on Canada's role in the atomic bomb drama, released by the Rt. Hon. C. D. Howe, Minister of Reconstruction and Supply, stated that Canada had been associated with scientific developments in atomic research since 1899 when Sir Ernest Rutherford began his work on radioactivity at McGill University. But it was the discovery, reported in 1939, of "fission" of the uranium atom that gave the first hope that it might be possible to release atomic energy on a large scale, capable of military and industrial applications.

From that time, scientists in Great Britain, the United States, Canada and France directed their energies towards the possibility of finding a war application for this research. On the fall of France, French scientists were sent to join the British scientists. In October 1940 information was exchanged among the countries concerned and in 1942 Great Britain proposed that an important section of the work should be carried on in Canada as a joint enterprise.

A laboratory was established in Montreal under the administration of the National Research Council of Canada. This laboratory had a staff of 340 and was by far the largest organization ever created in this country to carry out a single research project.

Work of the laboratory was closely coordinated with the tremendous activity in this field in the United States. Its work led to the design and construction of a pilot plant for the production of atomic bomb materials. The plant is located at Chalk River, Ontario, about 120 miles west of Ottawa. A branch of the National Research Council has been established there in association

> with the pilot plant to carry out research on the application of atomic energy in war and in industry and on the use of its products in research and medicine.[1]

The involvement of Canada in the effort to construct an atomic weapon which could be employed in World War II is real. There is however a question of the nature and value of the Canadian contribution.[2] As the above illustrates there are two areas of activity in which Canada and Canadians participated. The first is the research and experimentation carried out by Canadian scientists and the second is the cooperation and international obligations of the Canadian government in the atomic weapons project. These two are not totally distinct but rather are at times interwoven, thereby making it mandatory to examine one in the context of the other. Emphasis will be placed on the governmental contributions; specifically the international obligations to which Canada was committed. It will also be valuable to examine the scientific endeavours in order to obtain a fuller understanding of the motives and terms of the role of Canada.

The earliest Canadian activity in the area of atomic energy occurred at the turn of the 20th century. Ernest Rutherford,[3] Professor of Experimental Physics at McGill

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[1] Report of the President, 29th Annual Report of the National Research Council 1945-46, 9 (1947).

[2] Infra, 31-32.

[3] Rutherford was from New Zealand. Previous to his appointment at McGill he studied at the Cavendish Laboratory in Cambridge, England under the eminent scientist J. J. Thomson. Eggleston, Canada's Nuclear Story, 7 (1965).

University, conducted research at the Macdonald Physics Laboratory on the theory of disintegration of matter. Rutherford discovered that substantial amounts of energy were released from radioactive elements. In, Radio-Activity, he writes:

> . . . [t]here is thus reason to believe that an enormous store of latent energy is resident in the atoms of the radio-elements. . . . If it were ever found possible to control at will the rate of disintegration of the radio-elements, an enormous amount of energy could be obtained from a small quantity of matter.[4]

From the time of the earliest discoveries of radioactivity[5] to the breakthrough of nuclear fission[6] there has been Canadian research.[7]

Subsequent to the 1939 discovery of fission much experimentation took place in an attempt to produce a chain reaction in uranium fission. Dr. George Laurence at the National Research Council in Ottawa began work on Canada's first experimental pile in March, 1940.[8] Laurence proposed

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[4] Id., at 8.

[5] Henri Becquerel of France discovered radioactivity in 1896. Id., at 5.

[6] There were a number of European scientists working on the problems of uranium bombardment. Lise Meitner and Otto Erisch suggested the theory of nuclear fission in a letter, dated January 16, 1939, to the English periodical "Nature". By the end of 1939 the theory was widely accepted. Id., at 11-12.

[7] Some of the scientists interested in the study were Dr. G. H. Henderson, Dr. Robert William Boyle and Dr. George Craig Laurence. Id., at 17.

[8] Id., at 21.

that the chain reaction could be obtained using uranium with carbon as the moderator. Laurence's work interested both the British and the Americans and this led to Canada's first international contacts in the field of atomic energy. In the late summer of 1940 Sir Henry Tizard led a mission to North America for the purposes of scientific exchange. R. H. Fowler[9] and J. D. Cockcroft, of the Tizard Mission had conversations with Dr. Laurence on his experiments and informed him of the experimentation taking place in Great Britain.[10]

American activity in uranium piles, although much larger a project than that carried on in Canada appears to have begun a few weeks after Dr. Laurence began in Canada.[11] Since the Uranium Committee of the National Defense Committee was engaging in work on the uranium and graphite pile, they had an interest in the progress Dr. Laurence was making. On November 28, 1940 while in Washington, D.C. Dr. C. J. Mackenzie[12] discussed Dr. Laurence's work with Dr. Lyman Briggs, chairman of the U.S. Uranium Committee. After Mackenzie's return to Canada, Dr. Laurence was authorized to

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[9]Professor Fowler had come to Canada in the early summer of 1940 as British liaison officer to the National Research Council. Gowing, Britain and Atomic Energy 1939-1945, 65 (1964).

[10]Eggleston, supra, n. 3, 23.

[11]Id.

[12]Dr. Mackenzie was acting President of the National Research Council. He replaced Major-General A. G. L. McNaughton who had been called into active service.

go to the United States and discuss the American work.[13]

Dr. Laurence, along with Dr. B. Weldon Sargent[14] continued the research to the conclusion that a chain reaction was possible but purer materials were needed. Although the Laurence-Sargent experiment reached no conclusive result[15] there were definitely indirect benefits which were derived. First the experience gained by the two scientists was a factor in guaranteeing that when the later efforts were begun in Canada, there was a group of Canadian scientists to work with the British. Second, some of the experimental data obtained by the two were employed in the Montreal Laboratory in 1943, which shortened the time needed for obtaining the constants necessary for the Chalk River plant.[16]

There was one other aspect of international interaction involved in these early years of the development of the atomic bomb. When Professor Cockcoft reported his visit with Dr. Laurence to the M.A.U.D. Committee[17] he advised that

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[13] Eggleston, supra, n. 3, 23.

[14] Dr. B. Weldon Sargent, also an alumnus of Cavendish Laboratory, was, at the time, teaching physics at Queen's University. He collaborated with Dr. Laurence in the experimentation during the summers of 1941 and 1942. Id., at 24.

[15] This is relative to the American development where much money and effort were invested and the first atomic pile went "critical" on December 2, 1942.

[16] Eggleston, supra, n. 3, 27-28.

[17] M.A.U.D. was the name given the uranium bomb subcommittee in England.

the work at the National Research Council's laboratory was suffering due to lack of funds. Lord Melchett of Imperial Chemical Industries (ICI) said he would attempt to obtain some financial assistance. This assistance was forthcoming in the form of a grant to the National Research Council through an ICI Canadian subsidiary. The purpose of this was to impress upon the Canadian government the importance of the work.[18] It is also likely that the funds were put to good use.

Direct Canadian governmental involvement with the atomic bomb project began in 1942. However the first mention of Canadian participation occurred on April 9, 1941. On that date most of the leading nuclear scientists in Great Britain met and the majority voiced the opinion that Britain could produce a nuclear weapon for use in the war effort if it could employ the industrial resources of Canada or some other Commonwealth country.[19] In July of 1941 the M.A.U.D. Committee concluded that the bomb was a real possibility and could produce decisive results. Therefore they recommended proceeding with the development of the bomb in collaboration with the United States. A subsequent recommendation by some other scientific advisers suggested that since the project was too large for wartime Britain, it should be done in the United States with "one pilot plant and full-scale separation plant

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[18] Gowing, supra, n. 9, 67.

[19] Eggleston, supra, n. 3, 34.

assembled in Canada."[20]

The first British overtures to Canada took place on February 19, 1942 when Sir W. Akers, head of the Directorate of Tube Alloys,[21] held discussions with Dr. Mackenzie. No concrete proposals on the matter of the atomic bomb arose from these talks. However on June 15, 1942 the British approached Canada with a definite proposal. This was the first time Prime Minister W. L. Mackenzie King became aware of the existence of the atomic weapons prospects. The British High Commissioner to Canada, Malcolm MacDonald, along with two British scientists, Sir George Thomson, British scientific liaison officer in Ottawa and M. W. Perrin, Aker's deputy in the Tube Alloys Project, approached Prime Minister Mackenzie King about uranium. The Canadian Prime Minister wrote in his Record that the British asked about "the acquisition of some property in Canada, so as to prevent competition in price on a mineral much needed in connection with the manufacture of explosives."[22] Since in 1942 the only two large producers of uranium appropriate for the bomb development were the Belgian Congo and Canada, the British were asking for Canadian government control of price and output

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[20]Stacey, Arms, Men and Governments, 515 (1970).

[21]The Directorate of Tube Alloys was the cover name of the organization directing the development of the atomic bomb in England.

[22]Pickersgill, The Mackenzie King Record, Volume 1 1939-1944, 413 (1960).

of the uranium produced at Eldorado Gold Mines Limited.[23] This would assure Great Britain of a supply of the much needed uranium. Mackenzie King referred the three to the Hon. C. D. Howe, Minister of Munitions and Dr. Mackenzie to work out the arrangements of such a proposal. Howe agreed to whatever measure Great Britain thought most advisable. The agreement reached was two-fold. The United Kingdom would purchase all the necessary Canadian uranium through the Canadian government and Canada agreed to purchase a majority voting power in Eldorado. The move toward government control was taken in anticipation of an increased importance for uranium. Howe further stated that after the majority holding of shares was completed he would be willing to discuss a division of control among Canada, the United States and the United Kingdom. Mackenzie King agreed to authorize such a purchase and an Order in Council was issued on July 15, 1942 authorizing purchase of any or all shares of Eldorado Gold Mines Limited to a maximum per share price of $1.25 with the total expenditure not to exceed $4,900,000. Howe immediately began to implement the government decision for control of Eldorado. Although the purchase of the shares was bound to take time, Gilbert LaBine, President of Eldorado and a personal friend of Howe, agreed from the

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[23] Eldorado Gold Mines Limited, which in June 1943 changed its name to Eldorado Mining and Refining Limited, was the Canadian producer of uranium. Uranium was in fact only a by-product of the production of radium which Eldorado mined at Great Bear Lake, Northwest Territories and refined at Port Hope, Ontario.

outset to cooperate fully.[24] Dr. Mackenzie was dispatched to Washington, D.C. to inform the U.S. government of the agreement, and received approval.[25]

The United States had actually involved the Canadian government in the supply of uranium issue a couple of months prior to the British proposal. The United States had been receiving the necessary uranium for their preliminary experiments with an atomic pile[26] from Canada but after Pearl Harbour and the increase in military planning the Americans realized that Eldorado's Great Bear Lake mine, if re-opened, could produce up to 300 tons of good grade uranium ore a year. In April 1942 the Office of Scientific Research and Development (OSRD) approached LaBine for an order of 200 tons of uranium. The Canadian government was involved because of the wartime regulations on the export of strategic materials and because of the necessity of governmental assistance in granting priorities for the necessary machinery to begin mining operations again at Great Bear Lake. In that same month C. D. Howe met with LaBine and promised assistance in the form of the granting of priorities for obtaining the necessary machinery and supplies. Although the question of leaving such an important strategic material in the hands of

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[24] Gowing, supra, n. 9, 182-183; Stacey, supra, n. 20, 515-516.

[25] Eggleston, supra, n. 3, 47.

[26] In the spring of 1941 Dr. Lyman Briggs placed an order with Eldorado for eight tons of refined uranium oxide on behalf of Roosevelt's Advisory Committee on Uranium.

private industry had at that time occurred to Howe, no move was made to take over or establish any controls.[27]

On July 9, 1942 the S-1 Committee of the OSRD agreed that E. B. Badger & Sons of Boston would be engaged for the design and fabrication of a heavy-water plant which was to be built in Trail, British Columbia. The erection and operation of the plant was to be the responsibility of Consolidated Mining and Smelting Company, which owned the property. The estimated cost of the construction was $2.5 million. The heavy-water was needed as an alternate moderator in the event that the graphite pile proved unsuccessful. In the end the supply was not needed because the graphite process produced a sufficient supply of plutonium for the bombs.[28] The contract for the Trail heavy-water project was between the United States government and a private Canadian company so the Canadian government was not informed of it. It was not until the end of August 1942 that Canadian officials knew about it. Dr. Mackenzie learned of the project when A. Lavendar on instructions from Vannevar Bush and the OSRD went to Ottawa to discuss patents on the proposed process.[29]

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[27] Eggleston, supra, n. 3, 44-45.

[28] The heavy-water supply was not needed later as well because the U.S. built three other plants located in West Virginia, Indiana and Alabama, so the supply from the Trail plant was loaned to Canada for use in an experimental reactor in Montreal in 1944. Groves, Now It Can Be Told, 15 (1962); Eggleston, supra, n. 3, 49-50.

[29] Groves, supra, n. 28, 15. Eggleston, supra, n. 3, 49-50. Since heavy-water was needed for the Montreal

[Continued on next page.]

Canada was still not contributing substantially to the development of the atomic bomb in any direct sense. Great Britain, however, on August 17, 1942 suggested further Canadian participation. The proposal was made by Gordon Munro, Deputy High Commissioner for the United Kingdom in Canada to Dr. Mackenzie. It was that Britain's team of scientists working on the Tube Alloys project at the Cavendish Laboratory in Cambridge be transferred to Canada to continue their work with the assistance of Canadian scientists.[30] Mackenzie was very encouraging in their conversation and Munro then went to see C. D. Howe. Howe approved but declined to disclose the agreement to his colleagues at that time. He did give Munro his word that the proposal would be given governmental approval.

In discussions between Malcolm MacDonald, the High Commissioner for the United Kingdom and C. D. Howe the question of details arose. It was proposed that Great Britain would continue to pay the salaries of the scientists from Cambridge and that Canada would meet all other expenses.

[Continued from p.18]
laboratory, consideration was given to the possibility of a Canadian government takeover of the U.S. contract. However this was never done and Canada got heavy-water whenever it was needed. Stacey, supra, n. 20, 527.

[30]Originally the British had hoped to move the Cambridge team to the U.S.A. However that plan was discarded primarily because the Americans were working on the graphite process and it was feared that the British heavy-water project would not receive sufficient facilities and priorities. The Americans were informed of the possibility of moving the Cambridge team to Canada. Dr. Bush approved, saying he would look forward to close communication between the Chicago project and the one proposed in Canada. Gowing, supra, n. 9, 188.

It was estimated that $500,000 would be necessary to establish the laboratory. No formal agreement was entered into at that time.[31]

Dr. Hans Halban, the head of the Cambridge group arrived in Canada on September 24, 1942 and the Anglo-Canadian nuclear research laboratory was established at the Université de Montréal during the fall and winter of 1942-1943. The details of the Anglo-Canadian arrangement were agreed upon in October of 1942 when Howe and Mackenzie went to London. The British proposals regarding finance and Mackenzie's about administrative procedure were adopted. There would be a Policy Committee consisting of Mr. Howe and the British High Commissioner in Canada. The committee would be responsible for decisions on matters concerning the scope and financing of the operations and would be responsible for the general principles of cooperation between the United Kingdom and Canada. As well their responsibilities would include the necessary agreements with United States agencies. The project would be administered by the National Research Council of Canada from funds supplied for the purpose. All formal negotiations requiring executive action would be conducted only by the president of the Council. A Scientific and Technical Committee would provide the active direction of the research. Dr. Halban would chair this committee and working members of the scientific teams would fill the other positions.

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[31] Eggleston, supra, n. 3, 51-52; Stacey, supra, n. 20, 517.

To ensure secrecy, the Chairman and Secretary would report directly to the President of the National Research Council. Informal reports and communications would pass directly between the different members of the team and to the British authorities but formal reports, negotiations and transactions would go to the President of the N.R.C. for consideration and approval.[32]

Dr. Mackenzie began assembling Canadian scientists to work with those from Britain at the Montreal laboratory. In November of 1942 Mackenzie asked the University of British Columbia for a leave of absence for Dr. George Volkoff to work on the project and also later that month Mackenzie convinced Dr. Laurence to join the Montreal team full time.[33]

Just as things were beginning to materialize with the Montreal laboratory problems arose in the nature of Anglo-American relations. The U.S. Military Policy Committee presented a review of progress in the area of atomic energy in December of 1942. They emphasized the need for a clear

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[32] Gowing, supra, n. 9, 189-190.

[33] Eggleston, supra, n. 3, 63. Dr. Volkoff worked on the nucleus of atoms and the atomic constituents of heavy-water. Some of the other Canadians involved in the work of the Montreal laboratory included: Weldon Sargent, who pioneered the graphite pile with Dr. Laurence; Leslie C. Cook; D. G. Hurst; J. W. T. Spinks; J. C. Mark; H. G. Thode; W. E. Grummit; E. F. Beamish; L. M. Pidgeon; G. S. Farnham; P. R. Wallace; P. Demers; L. Yaffe; M. Goldstein; L. G. Elliott. Id., at 107-116. A Canadian from Hamilton, Ontario, Dr. W. H. Zinn, contributed greatly to the American atomic program. In 1944 Dr. Zinn was in charge of the Argonne Laboratory, which housed both a carbon and a heavy-water pile. Id., at 131, 146.

policy on future relations among the United States, the United Kingdom and Canada. The following alternatives were offered:

> (A) Cessation of all interchange.
> (B) Complete interchange not only in the research field, but in development and production, including free interchange of personnel.
> (C) Restricted interchange of information only to the extent that it can be used now by the recipient.[34]

The third alternative was the preference of the Committee and the President followed their recommendation. As a result of this decision Dr. James B. Conant, Chairman of the U.S. National Defense Research Committee, sent a letter on January 2, 1943 to Dr. Mackenzie enunciating the terms of the American interchange of information with the Montreal laboratory. This represented a reversal of policy and was a turning point in the relations with the United States. The major secret which the United States would not reveal to the Montreal team was the method of extraction of plutonium. There was also a restriction on the design of the heavy-water plant for the production of plutonium and the methods of preparing heavy-water. There was to be exchange of information on the diffusion process but the Canadian group would have to direct their activities in accordance with the program worked out with the American engineers, Du Pont Company.[35]

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[34] Groves, supra, n. 28, 130.

[35] Eggleston, supra, n. 3, 65-66.

The reason for this change of policy seems to have been the U.S. fear of leaks in security.[36] The Cambridge group in Montreal was composed largely of non-British scientists and as history was to reveal, these American apprehensions were not totally unwarranted.[37]

The British were shocked at this new American policy position.[38] Dr. Mackenzie did not feel the American proposal was that unreasonable.[39] Two important consequences arose from this turn of events.[40] The first was that Canada was placed in the center of the controversy. It was of great importance to Canada to maintain good relations with the

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[36]Eggleston suggests three reasons for President Roosevelts' decision to follow the information interchange restriction. The three all deal with security. The first was the existence of an Anglo-Russian agreement for the exchange of new weapons. The second reason was the non-British scientists working with the Tube Alloys Project in Montreal. Finally the U.S. were hesitant to provide the secret information to the British scientists because they were linked to Imperial Chemical Industries, which the U.S. felt was interested in post-war commercial uses of atomic energy. Id., at 68-69.

[37]The actions of Klaus Fuchs, Alan Nunn May and Bruno Pontecorvo justify the U.S. stress on secrecy.

[38]Stacey, supra, n. 20, 517. The british refused to accept the terms of the Conant letter and as a result the Americans refused to provide any information or materials at all. Gowing, supra, n. 9, 194.

[39]Stacey, supra, n. 20, 517.

[40]This discussion will not deal in detail with the Anglo-American conflict over the interchange of information. For a good accounting of the events, see Eggleston, supra, n. 3, chapter 5.

United States,[41] while on the other hand the Montreal Laboratory presented a tremendous opportunity for Canada to be involved in an important scientific development and it had already a significant investment in the project. The Canadian position was established on May 1, 1943. Mackenzie, aware of the great progress the Americans were making, urged C. D. Howe to inform the British that, unless they accepted the terms established by Conant, Canada would not be prepared to continue with the project.[42] This put pressure on the British to attempt a reconciliation with the Americans.

The second consequence was the effect this period of uncertainty had on the scientists in the Montreal laboratory. Although they managed to do some important work during this time, there was a great sense of frustration because all the work had been geared to the development of an atomic pile, the possibility of which was in doubt.[43]

In the midst of this period of uneasiness another controversy arose. In May 1943 the United Kingdom became aware of a series of secret contracts between the United States Army and Eldorado Mining and Refining Limited which effectively gave the United States a monopoly on the Canadian uranium for the following few years.[44] This placed Canada in the uncomfortable and embarrassing position of promising

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[41] Gowing, supra, n. 9, 196.

[42] Eggleston, supra, n. 3, 177.

[43] Gowing, supra, n. 9, 196.

[44] See Appendix A for the letter from LaBine to Howe listing the status of contracts with the U.S. Army.

uranium to the United Kingdom but perhaps not being able to supply because of the contracts LaBine, on behalf of Eldorado, had made with the United States Army. As a last resort the Canadian government could have expropriated the properties of Eldorado, thereby controlling the uranium contracts. This was an unrealistic possibility because the Canadian government would be extremely hesitant to strain relations with the United States, especially since the Americans appeared to be the only country capable of producing an atomic weapon which would be useful to the war effort.[45]

There are two differing explanations of how this problem arose[46] but it appears likely that Howe's letter to LaBine on December 5, 1942[47] produced the initiative for the contracts. Mackenzie dismisses the importance of Howe's letter, because Howe had informal assurances from the Americans that the requirements of the Montreal project would be met. In fact this is what happened.[48]

There was a marked improvement in Anglo-American relations which culminated in the signing of the Quebec Agreement on August 19, 1943. Although Canada was not a party to the conference and not a signatory to the agreement, it is important because the Quebec Agreement set out the terms of

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[45] Eggleston, supra, n. 3, 79-80.

[46] Stacey, supra, n. 20, 520-521.

[47] See Appendix B.

[48] Stacey, supra, n. 20, 521.

cooperation and atomic development until after the war.[49] Prime Minister W. L. Mackenzie King was consulted twice before the signing of the Quebec Agreement. On August 8, 1943 Sir John Anderson, Lord President of the Council in the United Kingdom Government, explained the atomic energy proposals to King, saying that he had an agreement which he felt both the British Prime Minister and American President would sign. He also mentioned that through this agreement Canada would be a party to the development.[50] Two days later Winston Churchill secured Mackenzie King's approval to the suggestion that C. D. Howe become a member of the proposed Combined Policy Committee of the United States, United Kingdom and Canada.[51] It appears that this Canadian position on the Combined Policy Committee was originally a British seat, which was given to Canada by the British.[52]

By the terms of the Quebec Agreement a Combined Policy Committee was formed basically to oversee and coordinate all the activities of the atomic project.[53] Through the Combined

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[49] See Appendix C for the text of the Quebec Agreement.

[50] Pickersgill, supra, n. 22, 532.

[51] Id., at 536.

[52] Stacey, supra, n. 20, 523. Evidence of this may be construed from the composition of the Combined Policy Committee. There were three American, two British and one Canadian positions. It is likely that originally there was to be parity between the United Kingdom and the United States. Since the U.S. would not conceivably agree to a minority situation, bearing in mind the progress they had made, Britain would have to relinquish one of its seats in order to have a Canadian representative.

[53] See Appendix C.

Policy Committee, Canadian involvement increased substantially. At the first committee meeting on September 8, 1943, a scientific subcommittee was struck on which Canada was represented by Dr. Mackenzie. The scientific subcommittee was to provide the Combined Policy Committee with the details and implications of the atomic program.[54]

Another subcommittee of the Combined Policy Committee was established on February 17, 1944, consisting of Leslie R. Groves, head of the Manhattan Project; Sir James Chadwick, head of the British team of atomic scientists in North America; and Dr. Mackenzie.[55] The subcommittee was to make recommendations concerning the joint development of a heavy-water uranium pile for the production of plutonium. The report of the subcommittee, which was the product of Chadwick's ideas, Groves' and Chadwick's drafting and Mackenzie's concurrence, concluded that the proposed heavy-water pile was unnecessary for the production of plutonium for the war but the post-war prospects of the heavy-water technique were potentially so important that they should not be ignored.[56]

On April 10, 1944 Dr. Mackenzie made a formal submission to Howe, which included the subcommittee's recommendations.[57] The estimated total cost of the joint British-

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[54] Eggleston, supra, n. 3, 88.

[55] Stacey, supra, n. 29, 525-528.

[56] Gowing, supra, n. 9, 273.

[57] See Appendix D.

American-Canadian project was $8 million in capital and $1.5 million in annual operating expenses. Taking into account the American supply of raw material and other expenses shared by the United Kingdom and Canada, Mackenzie estimated Canada's share for 1944-45 at $4.5 million. The Cabinet War Committee approved the project under the title of "Special Radiological Project" on April 12, 1944. The expenditure maximum was $4 million for capital and $750,000 for operating expenses.

The Combined Policy Committee approved the joint project the next day. At that meeting Groves promised American support for the project. The American support proved to be essential, for without it the Chalk River nuclear power station would not likely have become a reality. The Combined Policy Committee decided that the Groves-Chadwick-Mackenzie subcommittee should continue as a supervisory body over the project in Canada.

There were then some changes in the Montreal team of scientists. Sir John Cockcroft was appointed Director of the project[58] and Dr. E. W. R. Steacie of the National Research Council became Cockcroft's Deputy Director.[59] Work on the heavy-water pile began almost immediately because a site had to be selected. The Chalk River site was eventually chosen but construction of the plant did not begin until

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[58] Eggleston, supra, n. 3, 102.

[59] Gowing, supra, n. 9, 275.

late August 1944.[60]

Canada was further involved in the atomic development through participation in the Combined Development Trust. Its role was similar to the one which evolved in the Combined Policy Committee. The Combined Development Trust was formed as a result of a concern for the future supply and allocation of raw materials for atomic research and development.[61] The purpose of the Trust was to "gain control of and develop the production of the uranium and thorium supplies situate in certain areas other than the areas under the jurisdiction of the Two Governments. . . ."[62] There were wide powers allocated under the Trust Declaration. These included the exploration of sources, the acquisition of mines, deposits or concessions and the supplying of mines with equipment. The Trust was under the direction of the Combined Policy Committee and the allocation of any materials acquired was up to the discretion of the Committee.[63]

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[60] Stacey, supra, n. 20, 528.

[61] It appears that the impetus for the creation of the Combined Development Trust came as a result of the hesitancy of Edgar Sengier of Union Minière, the company that supplied the rich uranium from the Belgian Congo, to sell uranium to the United States alone or Great Britain alone. Sengier indicated that he might allocate the supplies to both countries acting together. This concept of joint acquisition of the Congo uranium was further developed to the idea of the Trust. Gowing, supra, n. 9, 298-299.

[62] Id., at 444. The Combined Development Trust was signed in June, 1944.

[63] Id., at 300.

As with the Quebec Agreement, Canada was not a signatory to the Trust Declaration, primarily because it was not a party to the Quebec accord. However the intention was that Canada should have a representative as one of the six trustees.[64] Once again Canada was participating in an international body dealing with atomic energy while not being formally involved in it. The Declaration of Trust was between President Roosevelt on behalf of the United States of America, and Prime Minister Churchill on behalf of the United Kingdom of Great Britain and Northern Ireland. Nowhere in the document was Canada or Canadian participation mentioned. The composition of the trustees was that there shall be six persons appointed by the Combined Policy Committee but there was no stipulation that any country be represented by a certain number of trustees.[65] Formally Canada had no role in the Combined Development Trust but its involvement was found in the informal arrangements pursuant to the signing of the Trust document.

Work on the Chalk River project progressed to the point that the preliminary low energy pile, Zero Energy Experimental Pile, (hereafter referred to as ZEEP) went into operation on September 5, 1945--less than one month after

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[64]Canada's representative on the Combined Development Trust was George C. Bateman. Groves, supra, n. 28, f. 174.

[65]This differs from the Quebec Agreement where, in the text of the agreement, the composition of the Combined Policy Committee is enunciated and C. D. Howe as a representative of Canada is mentioned.

the first atomic bomb was dropped on Hiroshima.[66] ZEEP was the first operational nuclear reactor outside the United States. The Montreal laboratory was extremely important, giving Canada a "flying start into the nuclear age: her standing in the world atomic energy can be traced back directly to ZEEP and the National Research X-perimental reactor (hereinafter referred to as NRX)."[67]

Canada was an original member of the "nuclear club". The participation and contribution was considered to be important to the development of the atomic bomb. Leslie Groves had the following to say regarding the Canadian contribution:

> In addition there were about a dozen Canadian scientists on the Project. In view of the scientists, even this relatively small number was of help, particularly as they were all first-rate men.[68]

In addition it must be remembered that Canada played a valuable role in connection with the supply of uranium. Eldorado Mining and Refining Limited supplied a good deal of uranium. The Canadian uranium may not have played a direct role in the atomic bombs[69] but the material most definitely was utilized in the preliminary experiments. Also it must be remembered that Eldorado also was responsible for the refining

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[66] Stacey, supra, n. 20, 528.

[67] Gowing, supra, n. 9, 287.

[68] Groves, supra, n. 28, 407.

[69] Stacey, supra, n. 20, 514.

of all the uranium purchased by the United States from the Belgian Congo.[70]

A most interesting facet of Canada's entry to nuclear energy at the time is the nature of those international commitments. It appears that Canada was able to become one of the world's few nuclear countries because of two factors--uranium and the United Kingdom. The uranium supply created a good deal of governmental involvement in this top secret venture almost from the outset. There is no doubt that the work of Dr. Laurence created an aura of respectability for Canadian work in the area and brought about initial contacts with the bomb project but it is submitted that the Canadian uranium supply and refining capacity were of such importance to both the United States and the United Kingdom that Canada was, by necessity of supply, brought in on the project.

The United Kingdom was the second contributing factor to Canada's initiation into the nuclear world. Besides Britain's interest in a Canadian uranium supply, it involved Canada directly in the actual work of the bomb development. The Montreal laboratory contributed in preliminary work and the research necessary for the heavy-water uranium pile for the production of plutonium, and the Chalk River plant produced the first nuclear reactor outside of the United States.[71]

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[70] Groves, supra, n. 28, 179. See also Appendix A. This means that the U-235 for the Hirshima bomb and the plutonium for the Nagasaki bomb either came from Canadian uranium or Belgian Congo uranium, which was refined in Canada.

[71] However the Chalk River project did not contribute to the development of the atomic bombs which were employed in the war.

Finally, it was through the United Kingdom that Canada obtained representation on the international bodies like the Combined Policy Committee and the Combined Trust Development. As will be seen below this led to an increased role for Canada in the international area. It may be said that during the war period Canadian participation was not recognized as an entity in itself but rather a function of the action of Great Britain. Henry Stimson and McGeorge Bundy in their description of Canadian activity in the development of the atomic bomb convey this point of view.

> The atomic undertaking was not solely American, although the managerial direction was exercised through American leaders working mainly with American resources. It was rather another and conspicuous example of co-operation between the United States and the British Commonwealth, in this instance represented by Great Britain and Canada, the latter being a critically important source of the necessary raw materials.[72]

Canada's treaty[73] commitments during World War II in regards to atomic energy are unique in two particular aspects. Firstly the treaties Canada was formally involved in as a

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[72]Stimson and Bundy, On Active Service in Peace and War, 614 (1948).

[73]The term "treaty" is used here in the broad sense of the word. Although the Vienna Convention on the Law of Treaties, 63 A.J.I.L. 875 (1969), refers to treaties as international agreements in written form, Article 3 states that the fact that the Convention does not apply to international agreements not in written form shall not affect their legal force. O'Connell in International Law, 195 (2d, 1970) states,

> A treaty is an agreement between States and/or international organizations governed by international law as distinct from municipal, the form and manner of which is immaterial in the legal consequences of the act.

Therefore treaty, when referred to here, is meant to include within its parameters all international agreements, whether they are oral or written and, in the case of oral agreements, whether they are later reduced to writing or not.

participant in negotiation and agreement were virtually all of a bilateral nature with the United Kingdom. During this time, with secrecy being extremely important, it is understandable that bilateral treaties would be employed. However it is interesting that there was an absence of Canadian-American treaties. The Canadian government did not proceed on any projects without informing the United States and receiving its approval but the treaty relations were entered into with Great Britain.[74]

The only major multilateral agreement to which Canada was a party was the one which established the heavy-water project at Chalk River. And this agreement was the product of a body (the Combined Policy Committee) on which Canada had representation but had no involvement in the body's formation.

Secondly, by the nature of the treaties and subsequent events, Canada found itself in the middle of the Anglo-American controversies. As mentioned above,[75] the Canadian government was faced with the difficulty of choosing between the United Kingdom--the atomic development--and the United States--friendly relations. The fact that Dr. Mackenzie and C. D. Howe had a greater appreciation of the American situation, which in itself is a product of the Canadian-

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[74]The majority of Canadian-American relations up to the time of the approval of the Chalk River Project consisted of the contracts with Eldorado Mining and Refining Limited for supply and refining of uranium and informal exchanges of scientific information primarily involving Dr. Laurence.

[75]Supra, 23-24.

American relations, and the fact that by the nature of the Canadian treaty commitments in this area, Canada was a third party in the Anglo-American dispute, were primarily responsible for the decision of Mackenzie and Howe regarding the dispute.

CHAPTER III

NUCLEAR COOPERATION AFTER WORLD WAR II

1. Tripartite Negotiations--The Truman-Attlee-King Declaration

After the end of the war, the topic of continued international cooperation on atomic energy was discussed. Lester Pearson attributes the need for international agreement by the fact that because the United States could not be assured of an atomic monopoly for very long,[1] it was important to have some form of international agreement. Accordingly a tripartite meeting was held from November 10 to November 15, 1945.[2] The Canadian approach to these discussions was based on a memorandum on atomic warfare,[3] which was drawn up by Lester Pearson and approved by Prime Minister King. The Canadian approach called for the United Nations to oversee activities in the field of atomic energy for the benefit of all countries of the world.

The end result of the tripartite meeting was the Truman-

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[1] Pearson, Mike, The Memoirs of the Right Honourable Lester B. Pearson, Volume I, 262 (1972).

[2] In attendance at the meetings were: President Truman, Secretary of State Byrnes, Vannevar Bush, Admiral Leahy for the United States; Prime Minister Attlee, Lord Halifax, Sir John Anderson for the United Kingdom; and Prime Minister Mackenzie King, Lester Pearson (then Canadian Ambassador to the United States) for Canada. Truman, Memoirs, Volume One: Year of Decisions, 539 (1955).

[3] See Appendix E.

Attlee-King Declaration of November 15, 1945. This declaration said in effect that, while free exchange of nuclear information would be desirable, it must be controlled and limited to peaceful purposes. In order to attain that end the three leaders called upon the United Nations to set up a commission empowered to prepare recommendations specifically:

> (a) For extending between all nations the exchange of basic scientific information for peaceful ends;
>
> (b) For control of atomic energy to the extent necessary to ensure its use only for peaceful purposes;
>
> (c) For the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction;
>
> (d) For effective safeguards by way of inspection and other means to protect complying states against the hazards of violations and evasions.[4]

The three countries declared that they would restrict exchanges of specialized information on the practical uses of atomic energy until adequate safeguards have been established.

Essentially the Truman-Attlee-King Declaration provided a justification for the three countries maintaining their atomic monopoly, at least for a short time,[5] while

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[4] Truman, supra, n. 2, 543.

[5] The first proposal for disarmament after World War II, the Baruch Plan, took the notion of the atomic monopoly
[Continued on next page.]

attempting to provide for a structure for dealing with atomic energy in the future. From a Canadian perspective, and particularly for the purposes of this discussion, the Declaration served two important purposes. Canada played a valuable role in the agreement itself, in that Lester Pearson was one of the three men who drafted the terms of the statement. Secondly, by the publication of this document, Canada gained recognition as one of the three "atomic" powers in the world. Prime Minister King signed the Declaration on behalf of Canada, thereby producing the first public document signifying the new position this country had taken in the international arena. Article 4 of the document more clearly enunciates Canadian participation as an atomic power, where it states "[r]epresenting, as we do, the three countries which possess the knowledge essential to the use of atomic energy. . . ."[6]

[Continued from p. 37]
a step further. By the terms of the Baruch Plan, presented to the United Nations Atomic Energy Commission on June 14, 1946, the U.S. would not cease the manufacture of atomic bombs, dispose of the existing bombs or supply the proposed International Atomic Development Authority (hereinafter referred to as the IADA) with full information regarding the production of atomic energy until an adequate control system was agreed upon and operating, and adequate punishments were set up. This plan ensured that the United States and Great Britain and Canada, maintained a monopolistic position until it was certain that the Soviet Union had complied fully with the proposed treaty. Further, after the IADA was in possession of the information, the U.S. still maintained the predominant position because, by the composition of the IADA, the Soviet Union would be the only non-capitalist member. Mazer, "Nuclear Disarmament and International Law", 17-18 (unpublished).

[6] Truman, supra, n. 2, 542.

Further Canadian participation in the area of atomic energy was evidenced in the Memorandum signed by the three leaders the next day. The Memorandum stated that there should be cooperation between the three countries in atomic energy. The Combined Policy Committee was called upon to prepare recommendations for terms of reference for the future cooperation.[7] The Combined Policy Committee appointed a subcommittee composed of Roger Makins of the United Kingdom, Leslie Groves of the United States and Lester Pearson of Canada to prepare the new document to supercede the Quebec Agreement.[8] Three documents were drawn up, including a revised agreement for cooperation and a new Declaration of Trust for the Combined Development Trust. However this agreement was never proceeded with because of Article 102 of the United Nations Charter, which required registration and publication of every treaty and international agreement.[9]

The post-World War II period was one of great uncertainty as to the future of atomic progress, especially in Canada after the NRX went critical on July 27, 1947.[10] In February 1946 at a meeting of the Combined Policy Committee,

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[7] Id., at 544.

[8] Groves, supra, Ch. I, n. 28, 405.

[9] Gowing, Independence and Deterrence, Britain and Atomic Energy, 1945-1952, Volume I Policy Making, 96 (1974).

[10] Infra, 48.

the United Kingdom announced that it planned to build a large-scale reactor on British soil for the production of plutonium for future use in military or industrial purposes. The United States voiced disapproval for security and strategic reasons. They felt that the pile should be built in Canada. Pearson, representing Canada at the meetings, agreed with the American position.[11] After this British announcement, Anglo-Canadian relations were extremely strained. Canada had hoped that Chalk River would be the beginning of a joint project between Britain and Canada on Canadian soil. By March of 1946 it was basically decided that Chalk River was to be a Canadian endeavour as opposed to the wartime collaboration which had created the project.[12]

Gowing states that although Canada had no desire to make an atomic bomb it played an equal role in post-war discussions of atomic weapons.[13] This was true in the Combined Policy Committee activities, as it was during the war. However Canadian involvement took on a new activity, which is directly attributable to its wartime contributions in atomic energy. This new Canadian role, initiated by the

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[11] Gowing, supra, n. 9, 98.

[12] Id., at 139. Since Canada had no desire to produce an atomic bomb and the possibility of nuclear energy as a domestic value was still far in the future, the joint Anglo-Canadian collaboration was viewed as important for the viability of the Chalk River Plant. The Canadians still allowed the British to use NRX for experimental purposes, which were of little value to the Canadian plans but which were important to the British project. Id,, at 141.

[13] Id., at 133.

Truman-Attlee-King Declaration, began in January 1946 by the first resolution of the United Nations (Resolution 1(1)). The General Assembly established the Atomic Energy Commission, which was to deal with the problem associated with the discovery and use of atomic energy and the atomic bomb. The members of the Atomic Energy Commission were the members of the Security Council and Canada.[14] Canada's role in disarmament negotiations since World War II has been considerable.[15] It is unique both because Canada was not

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[14] Epstein, Disarmament, Twenty-five Years of Effort, 4 (1971).

[15] Epstein states that Canada has been associated with practically all efforts for disarmament since the war. Id., at 4, f. 2. The following is a brief summary of disarmament efforts Canada has been a part of, from the participation in the Atomic Energy Commission up to 1960.

By Resolution 502(vi) of the UN General Assembly in 1952, a Disarmament Commission was established. It was again composed of the Security Council members and Canada. Id., at 6.

After the U.S. hydrogen bomb test in 1954, the United Kingdom proposed a sub-committee of five members of the Disarmament Commission to carry out negotiations in private. The sub-committee, which met in London annually from 1954-1957, was composed of representatives from the United States, the Soviet Union, the United Kingdom, France and Canada. Id., at 7.

In the summer of 1958 a Conference of Experts on the Detection of Nuclear Tests was held. The purpose of the conference was to determine how to control the cessation of nuclear weapon tests. There were four countries from the East (the USSR, Poland, Czechoslovakia, and Romania) and four from the West (the USA, the United Kingdom, France and Canada) represented. These same countries held another meeting in July of 1959 on detecting nuclear tests in outer space. Id., at 10.

In the autumn of 1958 there was a Conference of Experts on Surprise Attacks. Albania for the East and Italy for the [Continued on next page.]

considered a major power in the world, as evidenced by the fact that it was not named to the Security Council as a permanent member, and because Canada did not attempt or desire to construct an atomic weapon.

2. Proposed Anglo-Canadian Collaboration

The issue of atomic cooperation was a continuing area of contention during the post-war period. In May 1947 Sir John Cockcroft visited Canada in order to bring the Canadians up to date on British progress and plans. He also presented a draft document which could have been used as the basis of Anglo-Canadian collaboration. The draft outlined proposed contributions of both Canada and Great Britain to a detailed program of facilities to be built. It also suggested the development of a power project to which Canada could decide the aspects it would become involved in. The draft was given to Dr. Mackenzie for consideration by the Canadian

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[Continued from p. 41]
West joined the eight countries which participated in the Conference on the Detection of Nuclear Tests for this one. Id.

The USSR, the USA, Great Britain and France established the Ten-Nation Committee on Disarmament in 1959. Once again the composition of the Committee was balanced equally between the East and the West. Bulgaria, Czechoslovakia, Poland, Romania and the USSR represented the East and France, Italy, Great Britain, Canada and the USA represented the West. Id., at 11.

Although this period of disarmament negotiations did not produce any significant results, it represented attempts at discussion of this most complex question.

Energy Board.[16] There were other suggestions of more Canadian participation in the British program,[17] but the British were awaiting Canadian response to the Cockcroft proposal. No Canadian comments were forthcoming, most likely because the Canadians favoured American proposals for tripartite cooperation.[18]

Historian Margaret Gowing questions whether the British missed a tremendous opportunity by not entering into a joint program with Canada, when the opportunity had presented itself, rather than choosing cooperation between the two countries. She suggests three possible difficulties with such a joint program. The first was that Canada did not intend to produce atomic weapons. However she mentions that this need not prevent a joint project for the production of fissile material, especially in light of the fact that Canada had sold plutonium to the U.S. and helped Great

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[16]The Canada Energy Board, which presumably is the Atomic Energy Control Board was established by the Atomic Energy Control Act, S.C. 1946, c. 37, s. 3. It was formed to provide an agency responsible for

> the control and supervision of the development, application and use of atomic energy, and to enable Canada to participate effectively in measures of international control of atomic energy which may hereafter be agreed upon.

Preamble to the Atomic Energy Control Act, S.C. 1946, c. 37.

[17]For example there was the proposal made by Christopher Hinton which suggested Canadian representation on all British committees concerned with future atomic energy policy. Gowing, supra, n. 9, 143.

[18]Id., at 143-144.

Britain in its plutonium program. The second problem was the financing of the program, which Gowing dismisses on the basis that Canada may well have been prepared to underwrite the majority of the costs as it did for the Montreal laboratory. Finally there would likely be the usual friction associated with joint projects of any nature. However Gowing points out that Canada and Great Britain certainly had a successful precedent to follow in the form of the Montreal and Chalk River projects.[19]

The conclusion was that it probably would have been advantageous to have followed the joint project route.

> In 1946 the British had chosen independence with collaboration rather than a joint programme, [sic] and although they seemed anxious later to change their minds they were not given the opportunity to do so. By mid-1947 people in the British atomic project wanted to revise the choice and return to much closer co-ordination and planning. But it was already too late.[20]

3. The Modus Vivendi

On December 10, 1947, at a meeting of the Combined Policy Committee, discussions were begun on the topic of tripartite cooperation and exchange of information in the area of atomic energy. This agreement was to be a replacement for the Quebec Agreement. Essentially it was an attempt to accomplish the same thing the Groves-Makin-Pearson subcommittee of the Combined Policy Committee had

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[19] Id., at 145.

[20] Id., at 146.

set out to do but failed because of Article 102 of the United Nations Charter. Agreement was reached on the exchange of information and raw materials allocation. Two basic changes from the Quebec Agreement were made. Quebec Clause 4, restricting British industrial participation in atomic energy, was eliminated and Clause 2 which gave each country veto power over the others use of an atomic bomb was also dropped.

Other terms of the agreement included a working partnership among Canada, Great Britain and the United States, the effects of which it was envisaged would extend beyond the sphere of atomic energy. Great Britain was able to obtain U.S. agreement for sharing of some atomic information with the Dominions of the Commonwealth.[21] However, as has been mentioned above, agreement had been reached before but action had been held up by the provision for registration and publication of international agreements by the United Nations.

In order to eliminate that problem in this instance it was decided that this should be simply a general declaration of intent, called a modus vivendi. This was basically to be a temporary working arrangement indirectly derivative of the Truman-Attlee-King Declaration of 1945. The modus vivendi was not signed but rather, at the meeting of the

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[21] This was quite a change in American policy, which, since the passing of the McMahon Act in 1946, had been to restrict as much as possible any information sharing. The method of circumventing the restrictions was the clause allowing the exchange of information for common defence and security.

Combined Policy Committee on January 7, 1948 the representative of each of the three countries declared his country's intention to conduct itself on the basis of the document.[22]

The advantage of such a structure was that the Agreement need not be subject to Article 102 of the United Nations Charter.[23] It is somewhat difficult to understand how this agreement was exempt from registration under the U.N. Charter. Article 102(1) states:

> Every treaty and every international agreement entered into by any Member of the United Nations after the present Charter comes into force shall as soon as possible be registered with the Secretariat and published by it.[24]

The modus vivendi was declared in 1948 so it most definitely cannot be excluded from Article 102 on the basis that it was entered into before the U.N. Charter came into force, which was October 24, 1945.[25] Even if the claim were made that the modus vivendi was simply a corollary to the Truman-Attlee-King Declaration of November 15, 1945, it still cannot claim to have its origins prior to the date of force of the UN Charter.

The only other possible claim to exemption would be

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[22]Gowing, supra, n. 9, 245-251. Representing Canada were Dr. C. J. Mackenzie and George Ignatieff. Id., at 272.

[23]Also the President did not have to submit the agreement to Congress. Id., at 251.

[24]Sohn, Basic Documents of the United Nations, 23 (2d, 1968).

[25]Id., at 1.

that the modus vivendi was not a "treaty or international agreement" as mentioned in the section of the Charter. However oral agreements can have similar validity to those in written form[26] and the title given to a particular agreement has no legal effect in itself.[27] Moreover the Regulations to give effect to Article 102 of the Charter of the United Nations[28] seem to preclude any such claim by the wording of Article I, which states:

> [e]very treaty or international agreement, whatever its form and descriptive name, entered into by one or more Members of the United Nations after 24 October 1945, the date of the coming into force of the Charter, shall as soon as possible be registered with the Secretariat in accordance with these regulations.

Since there is no real doubt that the modus vivendi was a form of international agreement among the United States, Great Britain and Canada, even though not formally agreed to in writing, it would be concluded that the modus vivendi should have been registered in accordance with the terms of Article

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[26] Supra, Ch. II, n.73.

[27] Friedmann, Lissitzyn and Pugh say that the term "treaty" is a generic one,

> In addition to the term "treaty" . . . a great number of other titles are also applied to international agreements: some of the more common of these are convention, protocol, declaration, charter, covenant, pact, act, statute, exchange of notes, and "modus vivendi", as well as the word "agreement" itself.

Friedmann, Lissitzyn and Pugh, Cases and Materials on International Law, 299-300 (1969).

[28] U.N.T.S. 1946-1947 I XX, dated December 14, 1946, Resolution No. 97.

102 of the United Nations Charter. The need for secrecy of such an arrangement can be appreciated and hence the action taken can be justified on that basis, but not from the standpoint of international law.

For Canada the modus vivendi had two basic effects, besides the obvious agreement for cooperation and information sharing. Once again Canada was a party to an international agreement on atomic energy, which served to establish its stature as an atomic nation. The second advantage for Canada was that the agreement, it was hoped, would settle some of the Anglo-American disputes which had been almost constantly a factor in discussions on atomic energy. As it turned out however these hopes were somewhat premature because the modus vivendi did not serve to settle much of the differences between the British and the Americans.

4. Tripartite Negotiations--A Failure to Agree

At the end of 1948 Great Britain and Canada began talks regarding atomic cooperation in the event of war. The British were interested in the Canadians supplying them with polonium and plutonium as well as certain weapons research facilities. Dr. Mackenzie was very receptive because Canada would then be able to construct another pile in order to produce enough of the materials. Since Canada had no plans for a bomb and nuclear power was still far in the future, this type of arrangement would justify the atomic program, which had been purely for research up to this point. In further discussion held during 1949 all Great Britain wanted by then was the

Canadian polonium.[29]

In 1949 two proposals for atomic cooperation among Great Britain, the United States and Canada were put forward. On July 14, 1949 the proposal presented by President Truman suggested that all uranium be brought to the U.S. for refining and storage, that British and Canadian scientists join their U.S. colleagues in the United States to work with them and that there could be a number of unassembled bombs stored on the British Isles. The final term of the Truman proposal was done to appease the British who felt the need for a defence force and who were working on the possibility of their own bomb. However it became apparent to Truman that Congress would not accept these proposals and so it was decided that any cooperation could not include the sharing of weapon data.[30]

The second proposal for cooperation resulted from a Combined Policy Committee meeting which began on September 20. There was more of a sense of urgency at this series of meetings prompted by the news received the day before of the first successful Soviet atomic explosion. Both the United States and Great Britain seemed to agree that it was necessary to "maximise the mutual defense effort."[31] The American proposal, which was the basis of the discussion,

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[29] Gowing, supra, n. 9, 325.

[30] Truman, Memoirs, Volume Two, Years of Trial and Hope, 303-304 (1956).

[31] Gowing, supra, n. 9, 282.

involved Canada substantially. The proposal recommended that:

1. to the fullest extent fissionable matererial, production plants, large-scale atomic energy developments and supplies of strategic materials should be in Canada or the United States;

2. expanded production programs should be in Canada or the U.S.;

3. to the fullest extent practicable, production facilities for the fabrication of atomic weapons should be in Canada or the United States;

4. nuclear components of atomic weapons with the exception of the amount necessary for the common war effort (in the United Kingdom) should be stored in Canada or the United States.[32]

This arrangement was seriously being considered by the parties. The proposal had a definite advantage for Canada because it was wishing to construct a second atomic pile but needed some justification other than as a research device. With the British agreeing to postpone construction on a third atomic pile, the second Canadian pile would be the replacement for the work which would have been done at the third British pile. Plus it would handle the new work resulting from the proposed cooperation.

Canada advised the meeting that this type of atomic "elite" arrangement may become in conflict with other defence commitments jointly entered into with NATO allies.[33] The

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[32] Id., at 283.

[33] Id., at 284. The Canadian atomic commitments to NATO are discussed in Chapters IV and VII.

proposal was referred to a group of different sub-committees for consideration.

The topic of weapons production presented difficulties. George Kennan leader of the U.S. negotiating team suggested three possible alternatives in descending order as to their acceptability by Congress. The first was that all production of atomic weapons would take place in the United States, with a supply then given to Great Britain. The second was for British weapon production in Canada, while the third, and, probably least acceptable to Congress, was a division of production between the United States and Great Britain, with the latter having a balanced atomic energy program. Great Britain rejected the first approach. The Canadian Ambassador in Washington, Hume Wrong, stated that the second proposal was not discussable. It was politically out of the question for the United Kingdom to operate large industrial facilities in Canada.[34]

Finally a brief interim report was approved by the Combined Policy Committee, which stated that "the Committee had 'on a purely exploratory basis' considered the problems of cooperation from the political, strategic, technical and combined planning point of view and had identified in a general way the probable desiderata of the governments and those aspects which required further consideration."[35] It

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[34] Id., at 285.

[35] Id., at 288.

was decided that each of the countries would consider their positions and would meet again. The negotiations between Great Britain and the United States, which presented the greatest problems, continued though there were a number of serious issues yet unsettled. However the whole proposal had to be abandoned when on February 2, 1950, Klaus Fuchs was arrested for supplying the Russians with atomic weapon information. There were two other external factors which precluded further agreement. These were Senator McCarthy's communist investigations and the American decision to go ahead with the hydrogen bomb.[36]

5. The 1950 Plutonium Sale Issue and Anglo-Canadian Cooperation

The best description of the Canadian involvement as a nation possessing atomic capabilities came from Sir Roger Makins who led the British team in the atomic energy talks. Makins said that the Canadians

> . . . regarded themselves as full atomic partners with the United States and Britain but looked upon the present talks as raising primarily Anglo-American issues. They were determined to increase their programme [sic], but at a leisurely pace, and leave themselves free to develop atomic energy without restraint in the future. They were sympathetic and helpful to the United Kingdom position and supported the fullest measure of technical co-operation [sic] and an integrated weapons production and storage plan.[37]

Once again Canada's position was somewhat in the middle of

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[36] Id., at 298.

[37] Id., at 289.

disputes between Great Britain and the United States. However in this instance Canada's position was clear and it did not have to take sides in the dispute. Rather Canada assisted both the United States and Great Britain, where it was appropriate and advantageous.[38]

In 1950 Canada and the United States reached agreement for the Canadian sale, to the Americans, of all excess plutonium. This was important to Canada for the future of the second atomic pile. Dr. Mackenzie wrote to Professor Cockcroft advising him that the contract with the United States was pending. The British were unconcerned. Later that year Britain's need for plutonium grew and Canada agreed to supply them with one kilogram. However at the end of 1950 Great Britain asked for a five kilogram loan. This was part of a scheme for greater Canadian interest in the military aspects of atomic energy, which included the loan of Canadian scientists to the British weapons research organization.

Canada could only supply half of the British request and was prepared to do so as long as it did not interfere with the agreement it had with the U.S. Great Britain was

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[38]Canada aided Great Britain with its first atomic bomb, and supplied the United States with considerable amounts of plutonium. Infra, 54-56; 53. As well, since 1946, Canada had been selling all uranium output, except what was needed for research at Chalk River, to the U.S. It appears that these sales did not go through the Combined Development Agency, which in January 1948 was the new name for the Combined Development Trust, or go through the Combined Policy Committee. This caused some friction in Anglo-Canadian relations because, by direct sales, Great Britain did not get a share of the uranium for its use. Gowing, supra, n. 9, 373.

upset, but had not responded to Dr. Mackenzie's letter indicating that they might need such large amounts of plutonium. To complicate matters further the United States was unwilling to let Britain have the plutonium. However matters were straightened out when Dr. Mackenzie persuaded the U.S. to allow the Canadian loan to Great Britain. This Canadian-American contract was very important for the Canadian atomic program because the proceeds of the plutonium sales would be sufficient to finance the new reactor in Canada and yield a profit for future experiments.[39] Although this dispute was potentially serious, the Canadians managed to obtain a satisfactory arrangement for all concerned.

Another development in 1950 concerned Anglo-Canadian cooperation in atomic weapons testing. At that time the British were looking for sites for their first atomic test. A feasibility study was done in Canada, although there was no ministerial authority on either side for Anglo-Canadian collaboration in weapon testing. A joint report resulted from this study which recommended a comprehensive plan for weapons testing. The report divided the tests of atomic weapons into three types of purposes. The first purpose was to test the functioning of a weapon. Secondly, given a weapon of known power, it was hoped to discover certain physical effects, like the effect of an explosion in shallow water. The third purpose of testing was to prove the

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[39] Id., at 326.

functioning and ballistics of an operational weapon.

According to the report, the first trial would accomplish the first and second purposes and, if agreement could be reached, there might be one or two tests a year for several years. If a suitable Canadian site could not be found, one in the Pacific would be used and a Canadian site would then be employed for subsequent tests. This would mean that the Canadian site would not need to be ready until the summer of 1953, one year later than necessary for the first test.[40]

Seven Canadian sites were examined as possibilities for the first British explosion. One near Churchill, Manitoba seemed ideal except that the shore was too shallow for ships to be used. Eventually it was decided to use the Monte Bello site near Australia.[41]

Canadian aid to the British for their first atomic explosion extended beyond the possibility of using a Canadian site. Gowing says that Great Britain was able to have a close and productive relationship only with Canada, although it did have uranium arrangements with the United States.[42] Much preliminary research and experimentation took place at Chalk River with Canadian assistance, although the work was of no real interest to the Canadian atomic project.[43] Chalk

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[40] Gowing, Independence and Deterrence, Britain and Atomic Energy, 1945-1952, Volume 2, Policy Execution, 477 (1974).

[41] Id., at 478-479.

[42] Id., at 501.

[43] Gowing, supra, n. 9, 141; supra, f. 12

River provided the British with information on the behaviour of plutonium,[44] as well as supplies of plutonium which expedited the Monte Bello project.[45] The British authorities decided that Canadian and Australian scientists should be invited to participate in the explosion test, which occurred on October 3, 1952.[46]

6. Canadian-American Cooperation

Despite the fact that no real working tripartite agreement existed for atomic cooperation among Canada, the United States and Great Britain, Canada, as mentioned above, played a valuable role in the British atomic program. Similarly the relationship between Canada and the U.S. continued to be closely cooperative. On June 15, 1955 an agreement was signed for Cooperation regarding Atomic Information for Mutual Defense Purposes.[47] Under the terms of the treaty, Article I, s. 1, there is provision for the exchange of atomic information, which the Government making the information available to the other deems necessary to:

(a) the development of defense plans;

(b) the training of personnel in the employment of and defense against atomic weapons; and

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[44] Gowing, supra, n. 40, 414.

[45] Id., at 421, 466.

[46] Id., at 484. However it is difficult to ascertain who, if anyone, from Canada was invited to participate.

[47] United States Treaties and Other International Agreements, 1955, Volume 6, Part 2, 2607.

(c) the evaluation of the capabilities of potential enemies in the employment of atomic weapons.[48]

The treaty further states in Article I, s. 2, that the information shall only be used for the preparation and implementation of defence plans in the mutual interest of both parties. Article II, s. 2, makes it clear that there shall be no transfer of atomic weapons or special nuclear material.

This treaty is evidence of the fact that Canada and the United States would have to cooperate for the defence of North America. It is significant in the fact that, although Canada had no interest in pursuing the construction of an atomic weapon, it would, by necessity, have to shift its position at least somewhat regarding atomic weapons. Eventually as will be shown below the mutual defence of North America was to lead to NORAD and the location of nuclear weapons on Canadian soil.

The 1955 Treaty for Co-operation Regarding Atomic Information for Mutual Defense Purposes was replaced by the signing of an Agreement for Co-operation on the Uses of Atomic Energy for Mutual Defense Purposes on May 22, 1959.[49] Simple examination of the differences in the titles of the two international agreements will indicate that the Canadian position had shifted in the intervening four years. One of

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[48] Id., at 2607-2608.

[49] United States Treaties and Other International Agreements, 1959 Volume 10 Part 2, 1293.

the factors in this change was the closer Canadian-American defence cooperation, which resulted from the signing of the NORAD agreement the year before.[50]

The terms of the second treaty bear examination in order to better appreciate the change which had occurred regarding Canada and atomic weapons. Article I provides for the exchange of information and the transfer of materials and equipment, providing it will not create an unreasonable risk to the defence and security of the transferor country. This general provision indicates an easier attitude by the United States, at least towards Canada, regarding both atomic information and materials.[51] Article II, which deals with the exchange of information, further indicates a change. According to the provision of the treaty, information will be exchanged, by both parties, if it is necessary to:

A. the development of defense plans;

B. the training of personnel in the employment of and defense against atomic weapons and other military application of atomic energy;

C. the evaluation of the capabilities of potential enemies in the employment of atomic weapons and other military applications of atomic energy;

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[50]For a discussion of NORAD see Chapters IV and VII.

[51]Both the treaties were a function of the amendment to the McMahon Act, which took place on October 31, 1951. The British had originally feared that the amendment of the McMahon Act would bring the Americans and Canadians closer, thereby creating problems in Anglo-Canadian cooperation. However the anticipated problems did not arise. Gowing, supra, n. 9, 417.

D. the development of delivery systems compatible with the atomic weapons which they carry; and

E. research, development and design of military reactors to the extent and by such means as may be agreed.

Comparison of Article II of the 1959 treaty with Article I, section 1 of the 1955 treaty indicates first of all, the rapid change of technology that had occurred in the four years between treaties. Sections B. and C. of 1959, which are parallel to subsections (b) and (c) of 1955, mention "other military applications of atomic energy". This was not included in the 1955 treaty but was included in 1959 presumably to cover atomic-powered vehicles such as submarines. The 1959 treaty has two new reference points for exchange of information. The first is the development of delivery systems for atomic weapons and the second deals with military reactors, which is defined as a reactor for the propulsion of military vehicles.[52]

The more significant articles of the 1959 treaty are Articles III and IV, which deal with the transfer of materials or equipment from the United States to Canada. Article III deals with the transfer by the U.S. to Canada of nonnuclear parts of atomic weapons systems involving Restricted Data[53] for the purposes of improving Canada's state

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[52]Article XII section F.

[53]Nonnuclear parts of atomic weapons systems involving Restricted Data by the definition in Article XII section D means:

parts of atomic weapons sytems, other than nonnuclear parts of atomic weapons [see f. 54], which

[Continued on next page.]

of training and operational readiness. Article IV provides that by amendment to this agreement the United States may transfer to Canada military reactors or parts thereof for military applications and special nuclear material for research on, development of, production of and use in military reactors for military applications. However the Article IV provision is only applicable if the 1959 treaty were amended to provide for such transfers.

Although this treaty provides for a significant change in the atomic program in Canada, by the terms of Article VI Section B, it does not allow for the transfer by either country of atomic weapons or nonnuclear parts of atomic weapons.[54] This means that under this treaty Canada could still not obtain an atomic weapon or parts of an atomic weapon which are made specially for the weapon and not used for any other purposes.

Taking into consideration the information the Chalk River Project had provided in assistance of the British atomic

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[Continued from p. 59]
> contain or reveal atomic information and which are not made, in whole or in part, of special nuclear material.

[54] According to Article XII section D, nonnuclear parts of atomic weapons means:

> parts of atomic weapons which are specially designed for them and are not in general use in other end products and which are not made, in whole or in part, of special nuclear materials. . . .

explosion at Monte Bello and the above treaties for mutual defence with the United States,[55] the events which were to follow as far as atomic weapons in Canada do not seem that incredible. Obviously there are far more factors which influenced the turn of events, some of which will be discussed below, but the progression of Canadian involvement as an atomic power is definitely a factor not to be overlooked when considering the fact that this country had atomic warheads. It is safe, and perhaps inane, to say that, had Canada not been a part of the war effort to produce the atomic bomb, the subsequent Canadian activities likely would not have occurred. However, beyond that obvious statement is the important aspects of the early developments of atomic energy in Canada. Canada was drawn into the "atomic world" by two different necessities: the American need for uranium and the British requirement for a location for its Cambridge team of scientists. It may well be these initial events,

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[55] One other treaty bears mention, but only briefly. This is the Agreement Between the Government of Canada, the Government of the United Kingdom of Great Britain and Northern Ireland, and the Government of the United States of America As to Disposition of Rights in Atomic Energy Inventions, dated September 24, 1956. Canada Treaty Series, 1956/4. The purpose of this treaty was to settle the disposition of rights to inventions and discoveries of the Combined Policy Committee. Article II states that the Government or Governments employing the inventor or inventors shall own the rights, title and interest in any of the Combined Policy Committee inventions. In addition, Article III provides for the exchange of certain rights, title and interests in all atomic energy inventions which are the subject of patents or patent applications by one Government in the country or countries of either or both of the other two Governments as of November 15, 1955.

coming as they did from the two different countries, set the stage for the unique role the Canadians were to play regarding the disputes between the United States and Great Britain. The fact remains that the formal and informal arrangements which existed between Canada and the United States and between Canada and Great Britain each contributed to a different and increasing Canadian role in the field of atomic energy.

CHAPTER IV

CANADA'S NUCLEAR WEAPON COMMITMENTS TO NATO AND NORAD

One of the most dramatic events in international law since World War II is the advent of the international organization.[1] Canada was a part of this trend toward the establishment of international and regional organizations and it was through two of these organizations that it became entangled in the nuclear weapons problem of 1963. This discussion will focus on Canada's nuclear weapon commitments to the North Atlantic Treaty Organization (hereinafter referred to as NATO) and the North American Air Defence Command (hereinafter referred to as NORAD). It is through such an examination that subsequent events can better be appreciated.

1. NATO

NATO was established by the signing of the North Atlantic Treaty on April 4, 1949. The Canadian motive in its "crusade" for NATO was political--to build a strong alliance for common action by western democracies grouped around the United States.[2] The first NATO involvement with nuclear power took the form of an Agreement Between the

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[1] Friedmann, "The Role of International Law in the Conduct of International Affairs", International Journal, 170 (1964-65).

[2] Gellner, Canada in NATO , 19 (1970).

Parties to the North Atlantic Treaty for Co-operation Regarding Atomic Information.[3] The emphasis of the agreement was for the United States to provide NATO with atomic information. However Article V provided the terms by which the other NATO countries could share their atomic information. To the extent they deem necessary, these countries could make available to NATO information in the same categories as that provided for the U.S. under Article I of the agreement. Article I states that information may be supplied if the supplier deems it necessary to:

> (a) the development of defence plans;
>
> (b) the training of personnel in the employment of and defence against atomic weapons; and
>
> (c) the evaluation of the capabilities of potential enemies in the employment of atomic weapons.[4]

By the terms of this agreement there were to be no transfers of atomic weapons or special nuclear material.[5] This treaty bears a remarkable resemblance with the bilateral agreement between Canada and the United States for cooperation regarding atomic information for mutual defence purposes.[6] The only real difference is that the NATO agreement is multilateral and the information is to pass in one direction; from

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[3] Canada Treaty Series, 1956/4, signed June 22, 1955.

[4] Id., Article I, s. 1.

[5] Id., Article I, s. 3.

[6] Supra, 56-57.

the parties to the North Atlantic Treaty to the North Atlantic Treaty Organization.

Later in 1955 NATO became more involved with nuclear weapons. At a NATO meeting held in Paris on December 15 and 16, it was formally decided that the NATO forces would be armed with "the most advanced--a euphemism for atomic--weapons."[7] It appears that tactical nuclear weapons were already being supplied for the defence of western Europe and that agreement on the employment of the weapons had been reached by December of 1954.[8] The decision to arm NATO forces with nuclear weapons was reiterated at a Paris meeting of heads of government of the NATO countries which was held on December 16-19, 1957. The decision was now no longer couched in ambiguous phraseology. The Final Communiqué of that meeting clearly stated the NATO position.

> . . . NATO has decided to establish stocks of nuclear warheads which will be readily available for the defence of the Alliance in case of need. In view of the present Soviet policies in the field of new weapons the Council has also decided that intermediate range ballistic missiles will have to be put at the disposal of the Supreme Allied Commander Europe.[9]

The communiqué was signed by Prime Minister John Diefenbaker

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[7]Gellner, supra, n. 2, 44.

[8]Pearson, Mike, the Memoirs of the Right Honourable Lester B. Pearson, Volume II , 90 (1972).

[9]Final Communiqué of the Meeting of the Heads of Government of the NATO Countries, in Paris, 16-19 December, 1957. Article 20. Gellner, supra, n. 2, 45.

on behalf of Canada.[10] It seems therefore that Canada agreed with this policy.

A necessary result of the decision to incorporate nuclear weapons into the NATO arsenal had to be a change of tactics, which involves different roles for the armed forces of the NATO countries. Canada was asked to assume the new "strike-reconnaissance"[11] role. NATO Commander General Lauris Norstad briefed the cabinet in May 1959, explaining that the RCAF was chosen because of its competence and that the "strike-reconnaissance" involved the use of nuclear weapons.[12] Later the Canadian government accepted this new role for the Canadian Air Force in Europe.

On July 2, 1959 the Honourable G. R. Pearkes, Minister of National Defence, announced that the Lockhead F-104 Starfighter was chosen as the Canadian forces aircraft for the strike-reconnaissance role. The plane was built in Canada with Canadian modifications and called the CF-104.[13] In March 1960 it was announced that the Canadian army brigade in Europe would be armed with the U.S. "Honest John" surface to surface missiles.[14] Both the CF-104 and Honest Johns were

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[10] Id., at 54.

[11] According to Gellner "strike" in NATO parlance means an attack with nuclear weapons. Id., at 55.

[12] Lyon, Canada in World Affairs 1961-1963, 80 (1968).

[13] Overseas delivery began in October 1962 and the planes were operating in Germany in December 1962. Gellner, supra, n. 2, 55.

[14] The Honest Johns were dispatched overseas in December 1961. Id.

nuclear weapons carriers, although conventional warheads were available in the U.S. for the latter. However the CF-104 could only employ a nuclear payload. This fact is important because, as will be discussed below,[15] there was some suggestion that the Canadian government did not realise that it was committing itself to the acquisition of nuclear weapons for the forces.

The arrangement by which Canada could (and eventually did) obtain nuclear arms for its weapons systems for NATO was the standard agreement by which all the American allies obtained U.S. warheads. This is in accordance with the United States Atomic Energy Act. The method of acquisition, referred to as the "two-key" arrangement provides that the warheads be stored next to the carriers (in this case the CF-104 and Honest John), but in U.S. custody and control. The warheads would only be released to the ally by the President of the United States, when he thought it necessary. At this point it would then be up to the ally to decide whether or not to use the weapon with the warhead. By this method the U.S. maintained absolute control over the nuclear arms until the President released them. In essence this meant two things: the United States could decide if atomic warheads could be used (not that they must be used by the ally) and that the allies (Canada included) would accept the nuclear weapons subject to the terms imposed by American law. The two-key

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[15] Infra, 74-75.

arrangement was the subject of discussion in the heated debate over accepting nuclear warheads[16] because some felt that such an arrangement undermined Canadian sovereignty.[17]

In conclusion, Canada had accepted the new roles requested of it for Canadian forces in Europe for NATO. There is no question that the commitment to supply the forces was in writing although it is not clear that the agreement specifically states that they were to be atomic.[18] General Norstad clearly stated his interpretation of the Canadian commitment at a Press Conference in Ottawa on January 3, 1963.

> We established a NATO requirement for a certain number of strike squadrons. This includes tactical atomic strike squadrons, and Canada committed some of its force to meet this NATO-established requirement. And this we depend on.[19]

2. NORAD

The Canadian involvement with nuclear weapons through NORAD was equally as important as those in NATO and was equally vague during this period of time. NORAD was formed on May 12, 1958 by an exchange of letters between N. A. Robertson, Canadian Ambassador to the United States and C. A. Herter on behalf of the Secretary of State John Foster Dulles.[20]

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[16] Infra, 77.

[17] Gellner, supra, n. 2, 61.

[18] Id., at 66.

[19] Id.

[20] Canada Treaty Series 1958/9

The reason the young Diefenbaker government agreed to the establishment of an on-going air defence system was that if another war were to come, it was expected that it would likely be with such extreme quickness that there would be no time to arrange any type of joint defence before the first strike. This was compounded with the fact that a nuclear attack, which was the prediction, would cause such tremendous devastation that although a retaliatory strike may be feasible, it would not diminish the damage which would already have been inflicted.[21] This new offensive military strategy, which resulted from the advent of the nuclear weapon, necessitated a new defensive strategy--NORAD.

NORAD was obviously dominated to a great extent by the United States because it was the Americans who were providing the lion's share of the defence of North America. However Canadian input was definitely provided for in the structure of NORAD.[22] The philosophy of the NORAD arrangement was based on the use of tactical nuclear weapons as a deterrence to the Soviet bomber threat of North America.[23] As the military capabilities improved with the innovation of

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[21]Stacey, "Twenty-one Years of Canadian-American Military Co-operation 1940-1961", Deener, Canada-United States Treaty Relations, 115 (1963).

[22]For example, the Commander-in-Chief NORAD and Deputy could not both be from one of the two countries. In practice it would seem obvious that the Commander-in-Chief would be American while the Deputy would be Canadian.

[23]Lyon, supra, n. 12, 77.

long-range missiles, the deterrence tactic was extended too. Bearing in mind the above basis for the defence of North America, it is not at all surprising that the United States would want the Canadian contingent in NORAD to be nuclear-armed.[24]

The first step in the direction of nuclear weapons for Canada through NORAD came on September 23, 1958, when Prime Minister Diefenbaker announced the incorporation of the U.S. Bomarc guided missile into the Canadian Air Defence system.[25] The Bomarc-B was the replacement for the CF-105 Arrow which was discarded.[26] The missile is an anti-bomber weapon with a range of 400 miles. Although it could have been fitted with a conventional warhead, with a great loss in efficiency, no such warhead was ever ordered or designed. According to the agreement the United States was to pay and supply the ammunition for the fifty-six missiles which were to be based in two squadrons at North Bay, Ontario and La Macaza, Quebec. These two bases would protect Toronto and Montreal as well as the Strategic Air Command bases in the U.S. In the agreement the Americans were given no reason

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[24] Gellner, supra, n. 2, 61.

[25] NATO Bibliography, 142 (1963).

[26] The government said that the reason the Arrow contract was cancelled was because, by the time the Arrow was to be operational, the threat of bomber attack would be overshadowed by the threat of the long-range missiles. The enormous costs of the Arrow must also have been a factor in the decision. The costs were exceptionally high because Canada could not sell the plane to any of its allies. Stacey, supra, n. 21, 116.

to doubt that the missiles would be armed with nuclear warheads as soon as they were installed.[27] Installation of the Bomarcs was completed in 1962 but without any warheads at all.[28]

In June 1961 the Canadian government obtained sixty-four CF-101B (Voodoo) aircraft from the United States for the RCAF squadrons in NORAD. The planes were armed with conventional air-to-air rockets. However, for efficiency, they should have been armed with nuclear warheads.[29] In exchange for the aircraft, Canada took over responsibility for the Pinetree Radar system. By integrating the Voodoos into the RCAF NORAD contingent the Canadian government was admitting that the threat of manned bomber attack was still a very real possibility--more so than they had anticipated in 1958 when the Arrow was abandoned.[30]

As was the situation with NATO, Canada had two nuclear weapon carrying systems for NORAD, but neither of these systems had any nuclear weapons. The Voodoos had conventional attack capability but the Bomarcs had no utility at all since they did not have any warheads--nuclear or conventional. The United States had wished (if not expected) that Canada

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[27] Gellner, supra, n. 2, 79-80.

[28] Lyon, supra, n. 12, 157.

[29] Id., at 81.

[30] Stacey, supra, n. 21, 117.

would accept nuclear warheads but had not pressed the issue. However the American position changed drastically after the events of the Cuban Missile Crisis, when it was decided that it was necessary to insist on Canada's compliance.[31]

In order to obtain nuclear weapons for the NORAD systems it appears that Canada would have to enter into the two-key arrangement with the United States.[32] It is not clear whether such an arrangement would have been necessary for Canadian acquisition of nuclear arms for just the NORAD systems because NORAD was a joint U.S.-Canadian effort with an American Commander-in-Chief. Gellner is not explicit on this topic when he says:

> . . . . the United States wanted the Canadian component of NORAD to be nuclear-armed just as the American was. Perhaps because it considered the problem to be indivisible, Washington thought that it had to insist on Canada also entering, in respect to its nuclear weapon carriers assigned to NATO . . . into the standard agreement by which U.S. allies arranged for the provision of American nuclear warheads in a manner that accorded with the United States Atomic Energy Act.[33]

However it does not seem likely that the United States authorities would be agreeable to atomic warheads being supplied to Canada without following the provisions of the Atomic Energy Act, even though NORAD was a bilateral agreement for the defence of North America.

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[31] Infra, 82.

[32] Supra, 67.

[33] Gellner, supra, n. 2, 61.

The commitment to accept nuclear weapons for Canada's four nuclear carriers systems was never enunciated in a formal treaty. However it is unreasonable to believe that NATO headquarters would have entrusted the nuclear strike role to the RCAF in Europe or that the United States would have placed the two Bomarc squadrons in Canada, had they not been certain of Canadian agreement towards the nuclear weapons. Peyton Lyon says that the reason there was no formal written document to this effect was because Canada's willingness to accept a nuclear arsenal for the weapons systems was clearly implied by Canadian actions, public announcements and private discussions between government officials.[34]

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[34] Lyon, supra, n. 12, 81. For further statements claiming a Canadian commitment to nuclear weapons, see Id., at 82, f. 6.

CHAPTER V

THE NUCLEAR WEAPONS CONTROVERSY: POLITICS

The issue of accepting nuclear weapons for Canadian forces in NORAD and NATO is one of the most interesting in Canadian political history. The events which led to the defeat of the Diefenbaker government and the quick acceptance of the weapons by the succeeding Pearson administration created some interesting legal problems. However it is necessary to examine the circumstances surrounding the 'Diefenbaker crisis" before analyzing the legal implications.

As was mentioned, it seems quite clear that Canada had voluntarily agreed to supply nuclear roles as part of its NATO and NORAD contingents.[1] There was some suggestion that when the controversy regarding the arming of Canadian nuclear weapon carriers with nuclear warheads became such an explosive political issue, the Canadian government had not realized that it was really committing itself to the acquisition of nuclear weapons. This approach cannot be seriously considered because it is inconceivable that the Canadian government could have ventured into the biggest and costliest single weapon system program ever undertaken in this country without knowing what the implications were.[2]

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[1] Supra, Ch. IV.

[2] Gellner, supra, Ch. IV, n. 2, 56.

It is clearly indicated that there was no misunderstanding of the commitments to which Canada bound itself by the words of Prime Minister Diefenbaker in a speech in the House of Commons on January 24 and 25, 1963.

> In December, 1957, I was one of those who attended the meeting of the NATO powers in Paris. We agreed to the establishment of stockpiles of nuclear warheads in NATO nations, to be readily available for use by nuclear forces in Europe who were then confronted with the threat of Russian nuclear weapons against them.[3]

The Prime Minister was more emphatic the second day of his address:

> . . . we undertook to equip our squadrons assigned to NATO for a strike reconnaissance role, which role would include the mission of delivering nuclear weapons. No one was under any misunderstanding in that connection.[4]

1. The Political Positions

In order to better understand the political turmoil and conflicting legal arguments surrounding the acceptance of nuclear weapons, it is important to appreciate the positions taken by the different political parties in Canada, in particular, and, as well, the stands of some of the political actors in this era of Canadian history.

(1) The Progressive Conservatives

The Progressive Conservative party, which at the time in question held a slim plurality in the House of Commons and as a result formed a minority government, had committed this

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[3] (1962-63) 3 H.C. Deb., 3128.

[4] Id., at 3136.

country to the policy of acceptance of nuclear weapons. It would seem logical then that the government, and particularly the more influential members of the Cabinet would be in favour of the policy which had been adopted over the period of time beginning in 1957. However one of the reasons for the government's hesitation in actually reaching an agreement with the United States which would facilitate the acceptance of the nuclear weapons was the strong personal opinions of the Prime Minister himself on the subject of nuclear weapons.[5] It is difficult to understand why, if Mr. Diefenbaker was personally hesitant to accept nuclear weapons, he agreed to the nuclear posture of both NATO and NORAD.[6] Diefenbaker's views against nuclear weapons were reinforced when Howard Green became the Minister of External Affairs on August 19, 1959, which was soon after the decisions had been made to acquire the two principal nuclear weapons systems--Bomarc for NORAD and CF-104 for NATO.[7] Green bitterly disliked nuclear weapons and was very much

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[5] Gellner, supra, Ch. IV, n. 2, 62.

[6] Perhaps a plausible explanation is that since he agreed to both NATO (December 19, 1957), see, Ch. IV at 65 and NORAD (May 12, 1958), see Ch. IV at 68, at such an early date after taking office as Prime Minister, that Diefenbaker simply accepted it as an unquestionable Canadian role.

[7] The announcement of the CF-104 was made on July 2, 1959, see Ch. IV at 66, and the announcement of the Bomarc was on September 23, 1958, see Ch. IV at 70.

pro-disarmament.[8]

As well, there were some members of the Progressive Conservative Cabinet who had misgivings about the two-key arrangement by which Canada was to receive the nuclear weapons. It appears that the proposed arrangement aroused some nationalist emotions.[9] There was a fear that the concept of joint control with the Americans would infringe on Canadian sovereignty. This viewpoint will be considered in detail below.[10]

These above factors influenced the government's position and as a result Diefenbaker put off negotiations with the United States about the acquisition of the nuclear weapons for the carriers. The public reason given by the Prime Minister was that "no decision will be required while progress toward disarmament continues."[11] At first glance this seemed like a plausible position for the government to take, however it must be pointed out that at the time this statement was made, the Soviet Union had stalled the disarmament talks by walking out of the Paris Summit Conference and the Disarmament

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[8]This is evident from the Minister of External Affairs' address to the House of Commons on January 24, 1963. (1962-63) 3 H.C. Deb., 3065-3071. See also Lyon, supra, Ch. IV, n. 12, 83.

[9]Gellner, supra, Ch. IV, n. 2, 63.

[10]Infra, 98-106.

[11]Prime Minister Diefenbaker's address to the Canadian Club in Ottawa on November 24, 1960. Gellner, supra, Ch. IV, n. 2, 63.

Conference in Geneva, ostensibly over the U-2 incident.[12]

A little over a year later Diefenbaker altered the stand somewhat by saying that Canada was not accepting the nuclear warheads for the time being because it believed that this would further the cause of disarmament. As long as there existed a possibility for disarmament, the reasoning was that there should be no proliferation of the nuclear family.[13] John Gellner points out that this might have been a politically acceptable though a militarily impossible compromise, had not the Cuban missile crisis intervened. The Cuban incident precipitated a change in American thought. Until this time the U.S. had wished the Canadians would accept the nuclear weapons but had not pressed the issue. However then it was decided that it was necessary to insist on Canada's compliance.

The argument that Canada should not accept nuclear weapons because there should be no proliferation of the nuclear family was later refuted by the Americans:

> . . . [t]he provision of nuclear weapons to Canadian forces would not involve an expansion of independent nuclear capability, or an increase in the 'nuclear club'.[14]

One other argument which was influential in deterring the government from concluding the necessary agreement with the United States was that Canada's image vis-a-vis the African and Asian third world countries would be enhanced

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[12] Id.

[13] Id.

[14] Lyon, supra, Ch. IV, n. 12, 158. For a discussion of this American statement, see, infra, 86-88.

if it did not possess nuclear weapons.[15] This "clean hands" argument had one major flaw in it as General Foulkes former Chairman of the Chiefs of Staff, pointed out:

> Canada cannot expect to get very much credit for this retarded change in policy, as it is well known in U.N. circles that Canada had no scruples about making handsome profits by selling ... uranium ... for weapon manufacture.[16]

A final factor which influenced the Diefenbaker position was the increased popularity of the "ban the bomb" movement in Canada. Although the movement may have had philosophical attraction to many of the Cabinet members, it is more likely that the real effect was from cold political considerations. It was feared that the Liberals, who had by this time changed their stand on the issue[17] would get tremendous political mileage from supporting the "ban the bomb" movement.[18]

Whatever may have been the reasons for the Diefenbaker government's decision to waffle on the acceptance of nuclear

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[15]Lester Pearson also subscribed to this viewpoint. T. C. Douglas quotes him as saying to the Liberal men's club of Vancouver in January, 1961:

> Canada must remain a non-nuclear power. By doing so, Canada can lead the middle powers in the struggle to abolish nuclear weapons and eventually all armaments.

(1962-63) 3 H.C. Deb. 3461.

[16]Lyon, supra, Ch. IV, n. 12, 115.

[17]See infra, 80-81.

[18]Gellner, supra, Ch. IV, n. 2, 62.

weapons, the fact remains that the commitments to obtain, and if necessary employ, the nuclear weapons were made. The result of this predicament, as will be seen, was a most heated political debate, which raised some unique legal implications.

(2) The Liberals

If the stand of the Progressive Conservative party seems confusing, the Liberal position will appear almost incomprehensible. Liberal leader Lester Pearson, in a speech in the House of Commons on February 20, 1959, clearly agreed with the commitments made by the Conservative government.

> I . . . agree with the Prime Minister that anything that can be done to limit the extension of the manufacture of these weapons should be done. I welcome his statement that these nuclear weapons are not to be manufactured in Canada. Nevertheless, with regard to the warheads of Bomarc missiles and defensive weapons of that kind, it seems to me that it would be quite insupportable, as long as they are used, to have Canadian air squadrons without them and the United States squadrons on the same airfield with them.[19]

However less than two years later the Leader of the Opposition and his party adopted an opposing viewpoint to this matter. Perhaps one of the reasons for this change was, as the Progressive Conservatives had feared, that the Liberals wished to take advantage of the popularity of the "ban the bomb" campaign. Pearson's address at the opening of the National Liberal Party Conference held in Ottawa on January

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[19] Id., at 58.

13, 1961 was clearly against the acquisition or use of nuclear weapons by Canada under any system of national or joint control.[20] Not only were these the views of the leader, but the National Liberal Party adopted a resolution incorporating much of what Pearson had said.

> Canada cannot deny nuclear weapons to other nations and at the same time arm her own forces with them. A new Liberal government therefore should not acquire, manufacture or use such weapons either under separate Canadian control or under joint U.S.-Canadian control.[21]

The only part of the Liberal position that remained constant over this period of time was the opposition to the manufacture of nuclear weapons in Canada.[22] However there is a significant change in the views of the Liberals, and particularly Mr. Pearson, regarding nuclear armaments for the Canadian forces at home and in Europe. The Liberals had not finished changing their minds yet because two years later they once again reversed their stand, with different reasoning.[23]

(3) The New Democratic Party and the Social Credit

Insofar as the other two parties in the House of

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[20] Id., at 62.

[21] Id., at 63.

[22] All the political parties in Canada were in agreement on this issue. This had been the policy since World War II and was in fact reiterated in 1964 in the Defense White Paper.

[23] See, infra, 84.

Commons are concerned it will suffice to briefly mention their respective positions at the time of the political debate. The New Democratic Party was unequivocally opposed to Canadian possession of nuclear weapons in any instance.[24] The Social Credit attitude is more difficult to ascertain. The party was opposed to the use of offensive nuclear weapons of mass destruction but seemed to be in favour of maintaining a system of nuclear deterrence for North America.[25]

2. The Cuban Missile Crisis

Despite the fact that it appeared that the Diefenbaker government was moving further away from obtaining nuclear warheads for the Canadian weapon systems there was one incident which almost resulted in the Conservative government concluding the necessary agreement with the United States. According to some sources Diefenbaker's government came very close to accepting the warheads during the Cuban missile crisis.[26] The crisis served to illustrate how useless the Canadian weapon systems were without the warheads. The feelings of the government are evident from the fact that after the crisis, in October, 1962, Canada proposed discussions with American officials in order to determine the

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[24] (1962-63) 3 H.C. Deb., 3100.

[25] Id., at 3089-3091.

[26] Lyon, supra, Ch. IV, n. 12, 117.

provisions of an agreement by which the Canadian weapons systems could be provided with the appropriate nuclear weapons.[27] However those discussions had not been concluded when the Diefenbaker government was defeated in a non-confidence motion in the House of Commons on February 5, 1963.

3. The House of Commons Debate

The great debate regarding nuclear weapons for Canada began in the House of Commons on January 25, 1963. During the course of the debate which took place on the 25th and 26th of January and the 4th and 5th of February, the Conservatives and the Liberals took new stands on the issue. The Conservatives acknowledged that the commitments to accept nuclear weapons for NATO and NORAD were undertaken, but came up with a new reason why Canada should not necessarily conclude the agreement with the United States. Previously the government was saying that it was not necessary to have such an agreement simply because the weapon systems had not been delivered[28] but since those weapons sytems were now installed and awaiting the agreement for the training of Canadian personnel, Prime Minister Diefenbaker said that there had been changes in the strategic thinking and planning in the western world.[29] As a result Canada should not just

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[27] Id., at 157.

[28] (1962-63) 3 H.C. Deb., 3119.

[29] Id., at 3136-3137; 3129.

follow its previous commitments but re-evaluate the situation in the light of the new circumstances. Diefenbaker wished to delay any decisions until after the meeting of NATO nations which was to take place in Ottawa in May of 1963. As far as NORAD is concerned the Prime Minister stated that negotiations will continue with the United States so that "in case of need nuclear warheads will be made readily available."[30] It should be noted that this statement does not say that the weapons will be in Canada but only that in case of need they would be available.

The Liberals on the other hand did another about face in their policy regarding nuclear weapons. However the reason for the Liberal decision to propose acceptance of the warheads was significantly different from that in 1959. Mr. Pearson supported the acceptance of the weapons on the grounds that Canada had committed itself to such a course of conduct and as a result must honour that voluntary commitment:

> I say that it is humiliating and dishonourable for Canada to make pledges and accept commitments and then refuse to discharge them.... Canada cannot maintain a position of respect and influence in the world on any such basis.
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> What then should the government do? It should act in order to ensure that the commitments accepted by Canada with her allies will be discharged by Canada as long as they exist.[31]

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[30] Id., at 3136.

[31] Id., at 3117.

Pearson mentioned the fact that alteration of Canada's commitments was feasible a few years prior to the situation in 1963 and that implementation of any change in policy would take years to take place.[32]

Pearson does not make it clear whether the responsibility is a legal one. He does quote a woman delegate at the Conservative convention who was reported by the press to have said: "[w]e have contracted. We have this by agreement. We promised. We have no choice now whatsoever."[33] That quotation although it does use terms such as "contract" and "agreement" does not indicate that Canada was legally bound to fulfill the obligations to NATO and NORAD. Obviously there are a number of factors to consider regarding this question and they will be dealt with at length below.[34]

During the debate in the House of Commons of January 25, 1963 Prime Minister Diefenbaker made a statement that negotiations were being conducted with American authorities which would provide for nuclear warheads for Canadian forces in NORAD.[35] The statement in itself was not altogether that important. What was important were the consequences of Diefenbaker's remark. Although Diefenbaker said that there

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[32] Id.

[33] Id.

[34] See infra, 106-133.

[35] (1962-63) 3 H.C. Deb., 3136; 3137.

never was any concealment of the fact that these negotiations were going on, it appears that the Americans held a different opinion. The Washington officials were angry because Diefenbaker had, in their eyes, unilaterally and without notice to the U.S. publically revealed that confidential negotiations were being conducted. As well they were upset because the Prime Minister intimated that the two countries might be near agreement, when in fact little headway had been made.[36]

The result of the American anger at Mr. Diefenbaker's actions came in the form of a press release of the United States Department of State on January 30, 1963. In effect, the American statement managed to undermine most of Diefenbaker's arguments for his government's position on nuclear weapons.[37] It first stated that the Canadian government adopted the Bomarc-B weapon system in 1958 and installation of the missiles without warheads was completed in 1962.

> The Bomarc-B was not designed to carry any conventional warhead. The matter of making available a nuclear warhead for it and for other nuclear-capable weapon systems acquired by Canada has been the subject of inconclusive discussions between the two Governments.[38]

Further the U.S. authorities stated that the discussions which

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[36] Lyon, supra, Ch. IV, n. 12, 154.

[37] Press Release No. 59 of the U.S. Department of State on the United States and Canadian Negotiations regarding Nuclear Weapons, 30 January, 1963. Gellner, supra, Ch. IV, n. 2, 74-75.

[38] Id., at 74.

began shortly after the Cuban missile crisis were confidential and at the request of the Canadian government. Those discussions included the possibility of providing nuclear weapons for the Canadian forces for NATO in Europe.

The press release also makes mention of the Nassau meeting.[39] However it served to discredit Diefenbaker's statement regarding that conference by saying that the Nassau agreements did not deal with the question of nuclear weapons for Canadian forces in fulfillment of NATO or NORAD obligations.

The State Department went further to point out that, although there was a need to increase the conventional forces in NATO for a balanced defence, the conventional forces were not to be an alternative to effective NATO or NORAD defence arrangements using nuclear weapons. Finally, the press release undermined the government's argument against accepting nuclear weapons on the grounds of an expansion of the "nuclear club".

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[39]The Nassau Meeting was a United States-British conference held at Nassau, Bahamas in December, 1962. Prime Minister Diefenbaker attended the last day of the meetings at the invitation of President Kennedy and Prime Minister Harold Macmillan. Diefenbaker had misinterpreted the discussions at Nassau and attempted to use the conference to his advantage as a reason to justify the Cabinet's hesitancy with regards to nuclear weapons. Lyon, supra, Ch. IV, n. 12, 155. Diefenbaker construed the talks as a concrete proposal for a multilateral nuclear force for NATO, which to him indicated a change in strategic policy. This then would mean the probability of a change in the Canadian nuclear role for NATO. Hence this is the reason that the Prime Minister wished to stall any decision until after the May conference of NATO to be held in Ottawa.

> The provision of nuclear weapons to Canadian forces would not involve an expansion of independent nuclear capability, or an increase in the 'nuclear club'. As in the case of other allies, custody of U.S. nuclear weapons would remain with the United States. Joint control fully consistent with national sovereignty can be worked out to cover the use of such weapons by Canadian forces.[40]

Obviously this action by the United States Department of State did not serve in any way to help the government's position for the impending vote of non-confidence.

Another incident, which indirectly was a result of Diefenbaker's address to the House of Commons, had a more devastating effect on the chances of the Diefenbaker government's surviving the non-confident onslaught. This was the resignation of the Minister of National Defence, Douglas Harkness. Harkness had been in favour of the acceptance of nuclear weapons into Canada and, along with his Associate Minister of National Defence Pierre Sévigny, had pressured the government to accede to the U.S. demands that Canada arm the weapons systems after the Cuban missile crisis.[41] The event which precipitated Harkness' resignation was a statement he made to the press on January 28, 1963.

The reason for the statement was Diefenbaker's address to the House of Commons on January 24 and 25, previously. Many people regarded Diefenbaker's words as not resolving the issue

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[40] Gellner, supra, Ch. IV, n. 2, 74-75.

[41] Id., at 64; Stursberg, Diefenbaker: Leadership Lost 1962-67, 20 (1976).

one way or the other, so that Harkness tried to dispel this feeling by the issuance of his press statement. He stated that Canadian obligations to arm some weapons systems with nuclear weapons was reiterated, along with a promise to fulfill these obligations. As well, he pointed out Mr. Diefenbaker's explanation of the possibility of changing the Canadian role in NATO in the May NATO meeting, which was to be held in Ottawa, and that negotiations with the United States regarding nuclear weapons for the Bomarcs and F-101 interceptors would continue in order to reach a satisfactory agreement. Harkness promised that a resolution of the entire issue of nuclear weapons would be forthcoming after the NATO meeting in May.[42]

It became clear almost immediately that Harkness had gone out on a limb in issuing the press statement. Clearly the Minister of National Defence had explained to the public what he thought the government's policy was, or, at least, what he thought it should be. However it became apparent that Harkness' interpretation was not similar to that held by the Prime Minister, the Secretary of State for External Affairs and a majority of the Cabinet. As a result Harkness resigned on February 3, and the Prime Minister released the letter the following day.[43] This event served to discredit Diefenbaker's claim that Canada was to honour

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[42] Gellner, supra, Ch. IV, n. 2, 72-73.

[43] Id., at 73.

the commitments it had made. With Harkness as Minister of National Defence, there was credibility to the argument that Canada was just waiting for the proper time to accept the weapons; but with his resignation, it seemed clear that the government stand at best would be against the weapons, or would be in the same state of suspended animation that it was in prior.

4. The Defeat of the Diefenbaker Government

The defeat of the Progressive Conservative government came after a heated debate in the House of Commons on February 4 and 5, 1963.[44] The original amendment of no confidence was proposed by the Leader of the Opposition, Lester Pearson but was amended by Robert Thompson of the Social Credit Party. The amendment to the Liberal amendment was carried by a vote of 142-111.[45] The amendment which led to the defeat of the government then read:

> [t]his government has failed up to this time to give a clear statement of policy respecting Canada's national defence, and has failed to organize the business of the house so that the 1963-1964 estimates and budget, could be introduced, and has failed to outline a positive program of follow-up action respecting many things for which this parliament and previous parliaments have already given authority, and does not have the confidence of the Canadian people.[46]

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[44] For an accurate summary of the debate in the House of Commons on February 4 and 5, 1963, see Lyon, supra, Ch. IV, n. 12, 180-185.

[45] (1962-63) 3 H.C. Deb., 3461-3462.

[46] Id., at 3462.

Although it may not appear that the reason for the lack of confidence in the government originated from the issue of defence and particularly the question of nuclear weapons for Canada, it is quite obvious from the debate which took place in the House on January 24 and 25 and February 4 and 5 that nuclear weapons was the issue of greatest importance. The vote on the amendment, as amended, was also carried by 142-111 margin. The House of Commons was adjourned at 9:05 p.m. on February 5, and the Governor-General dissolved the twenty-fifth parliament by proclamation on February 6, 1963.[47]

5. The 1963 Election

The obvious result of the defeat of the Progressive Conservatives in the House of Commons was the calling of an election for April 8, 1963. The nuclear weapons debate from the House of Commons continued throughout the election campaign and easily became the largest issue.[48] The party platforms during the campaign reflected basically the positions of the parties during the House of Commons debates. There were

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[47] Id., at 3462-3463. It is interesting to note that Mr. Harkness absented himself from the House along with Arthur Smith (also a Conservative from Calgary) when the vote was taken. Another Conservative, Edmund Morris, from Halifax, refused to vote. Lyon, supra, Ch. IV, n. 12, 188. It has been suggested that Mr. Diefenbaker could have survived the non-confidence motion had he attempted to find allies in either the Social Credit or New Democratic parties. However the attempt he made in trying to find friends in either of the two parties came too late. Id., at 185; 183.

[48] Id., at 192.

however some minor changes.[49]

The Conservatives announced that there was not to be any strict requirement that all members adhere to any one policy on defence. As a result at least six of the PC candidates came out unequivocally in favour of nuclear weapons. Despite this "non-doctrinaire" edict of the party a number of key members of the Conservatives either resigned, or chose to "sit out" this election.[50] One of the more unique positions was that professed by the new Minister of National Defence, Gordon Churchill. He said in effect that Canada was currently fulfilling its role in NATO. He claimed that the Canadian forces were fully trained on the Honest John battery and that by June the pilots would be trained for their strike-reconnaissance role with the Starfighters. However he made no mention of the bilateral agreement with the United States which was necessary before such training could be carried out. It is suggested that perhaps he felt that in the case of an emergency there would be no requirement of for any bilateral agreement. However the more likely explanation is that he did not fully comprehend that any further bilateral arrangements were necessary.[51] As far as the Canadian commitment to NORAD was concerned, Mr. Churchill seemed

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[49]For a good examination of the 1963 election, see Id., at 192-222.

[50]Id., at 193.

[51]Id., at 193-194.

to agree with Mr. Diefenbaker.[52]

Mr. Diefenbaker maintained the opinion that negotiations would be continued with the United States so that warheads would be made available and accessible for the Bomarcs and Voodoos for NORAD. He was never clear on how the warheads would be stored in the United States and quickly transported to Canada but said the government had a working plan.[53] The Prime Minister also asserted that the Bomarcs could be armed either with nuclear or conventional warheads.[54] Mr. Diefenbaker's stand on NATO was similar to that enunciated in the House of Commons. He hoped to clear things up at the NATO meeting in Ottawa in May.[55]

Mr. Pearson and his Liberal party were forced into the role of "champions of nuclear weapons". In order to deal with the accusation that the Liberals would accept the nuclear weapons and immediately negotiate their removal, Mr. Pearson downplayed the assertion that his party would renegotiate Canada's role in NATO and NORAD and emphasized the commitments the Conservative government had made. He clarified his

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[52] Id., at 195.

[53] Mr. Harkness refuted this plan by saying that such an arrangement was not feasible. Id., at 195-196.

[54] This led to an accusation that Mr. Diefenbaler had released classified information regarding the Voodoo interceptors. As well it was clear that no conventional warhead had been designed for the Bomarc B. It would have taken a lengthy period of time and a large expenditure to do so. Id., at 196-197.

[55] Id., at 196.

platform by stating that it was not his policy to

> . . . accept nuclear weapons today and get rid of them tomorrow. This is not our policy. . . . Now and for some time ahead, we must, and will, retain the weapons that we have. It is essential, therefore, that they be made effective.[56]

This explicit policy caused some dissention among the Quebec Liberals who were opposed to this stand on nuclear weapons.[57]

The New Democratic Party stuck to their policy against the acquisition of nuclear weapons for Canada. Mr. Douglas referred to the election as a referendum on nuclear arms.[58] The Social Credit Party found itself severely split over this issue. The Quebec wing of the party, led by Réal Caouette rejected the necessity of nuclear weapons, while the rest of the party favoured some sort of arrangement for defensive nuclear weapons.[59]

There were a number of developments which took place during the election campaign but for the sake of relevancy only one will be dealt with. The Bomarc-B missile became the symbol of the entire nuclear weapons controversy.[60] This was extremely ironic because the missile was considered

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[56] Id., at 198.

[57] Id. It is interesting to note that Mrs. Pearson found it necessary to resign as an Honourary Sponsor of the Voice for Women because the organization was opposed to nuclear arms for Canada. Id.

[58] Id., at 199.

[59] Id., at 199-200.

[60] Id., at 203.

a relatively unimportant weapon. This made for political "jockeying for position" among the parties. The Bomarc matter came about on March 29, 1963, when an edited transcript of the United States Secretary of Defence, Robert McNamara's testimony to a House of Representative committee was released. At the hearings Mr. McNamara stated that the value of Bomarc was not great and that

> [a]t the very least, they would cause the Soviets to target missiles against them and thereby increase their missile requirements or draw missiles on to these Bomarc targets that would otherwise be available for other targets.[61]

The U.S. State Department at once issued a statement which stated that the Canadian deployment of Bomarcs at North Bay and La Macaza were of greater value than those in the United States because they were better dispersed than those in the United States and that obviously there were targets in that country which were of a higher strike priority.[62]

Mr. Diefenbaker, who had been criticizing the Bomarcs because of their relatively low importance, used this as an opportunity to attack the Liberal policy. He accused the Liberals of advocating a weapon for Canada which was "hardly worth having" and making Canada "a decoy duck in a nuclear war".[63] T. C. Douglas supported this viewpoint as well.[64]

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[61] Id., at 204.

[62] Id.

[63] Id., at 205.

[64] Id.

Mr. Pearson attempted to use the McNamara statement in the reverse--that is to discredit the Progressive Conservative government. He pointed out that it was the Conservatives, not the Liberals, who had acquired the Bomarc and that if they were useless, as Mr. Diefenbaker was advocating, why had Mr. Diefenbaker not disposed of them.[65] It appears that, although Mr. Diefenbaker was scoring political points by his attack of the Liberals, he may have gone too far. It is pointed out that Canadians may

> . . . have considered it irresponsible to exploit the grim facts of the nuclear dilemma to score debating points . . . [and] Mr. Diefenbaker's exploitation of . . . [the McNamara testimony], may have cost more support than it gained.[66]

The result of the election on April 8 was a minority Liberal government. The Liberals increased their seats from 100 in 1962 to 129 while the Conservatives decreased their representation from 116 to 95. The NDP and Social Credit also were depleted in their strength in the House of Commons. The NDP went from 19 to 17 seats in the House and the Social Credit from 30 to 24.[67]

6. Resolution of the Controversy

The new Liberal government, under Prime Minister Pearson,

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[65] Id., at 206.

[66] Id.

[67] Id., at 211. Howard Green, who, throughout the campaign had advocated a Canadian role in disarmament, was defeated in his Vancouver riding, where "ban the bomb" was strong. Id., at 212.

which replaced the Conservatives on April 22, 1963, wasted little time in resolving the nuclear weapons controversy. They quickly negotiated a standard agreement with the United States for the provision of nuclear warheads for the Canadian nuclear weapons systems.[68] The agreement was signed on August 16, 1963.[69]

At the time, the political drama surrounding the Canadian acceptance of nuclear weapons seemed very important and the potential consequences of the various alternatives critical not only to Canada, but very possibly the world. However in retrospect a different perspective has been taken on the events of 1963.

> As of 1967, there is still no evidence to suggest that Canada's acceptance in 1963-64 of nuclear ammunition under joint control significantly weakened its role in the United Nations or the disarmament talks in Geneva. On the contrary it appears to have strengthened Canada's diplomacy by helping to restore its influence with the NATO allies and also its reputation for common sense. Never in Canadian history has there been so heated an argument to so little purpose.[70]

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[68] Gellner, supra, Ch. IV, n. 2, 75.

[69] Correspondence from the Under-Secretary of State for External Affairs, dated September 23, 1976. By an agreement signed on September 28 and 30, 1963, permission was given for the availability of nuclear weapons for certain U.S. air defence forces stationed in Canada.

The NATO Council meeting, held in Ottawa during May, 1963, produced the creation of a post of Deputy for Nuclear Affairs under SACEUR. Gellner, supra, Ch. IV, n. 2, 83.

[70] Lyon, supra, Ch. IV, n. 12, 222.

CHAPTER VI

THE NUCLEAR WEAPONS CONTROVERSY: LAW

1. Canadian Sovereignty and the Two-key Arrangement

The first of the legal issues arising from the nuclear weapons controversy is whether by agreeing to the two-key arrangement with the United States for the acquisition of the weapons, it severely challenged Canadian sovereignty. The initial question is what necessary components are there for sovereignty under international law and, determining that, what are the effects of violation or incapacity to perform these components. A popular reference regarding sovereignty is from the Convention on Rights and Duties of States.

> Art. 1. The state as a person of international law should possess the following qualifications: (a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with other states.
>
> Art. 2. The federal state shall constitute a sole person in the eyes of international law.[1]

However the problem with this statement of the Montevideo Convention is that it refers to the four qualifications of a "state" rather than of a "sovereign". There can be conflicting views as to whether statehood and sovereignty differ[2]

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[1]Convention on Rights and Duties of States--issued at Montevideo, December 26, 1933, 49 Stat. 3097, T.S. 881; 165 L.N.T.S. 19. See Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 153.

[2]Mazer, "Canada and Sovereignty--An Examination of Canadian Sovereignty from a Legal Perspective", 3-4, (Unpublished).

and if this is so there is not a great deal of value in the Montevideo convention as regards sovereignty.

Legal theorists have attempted to define the term and the results have been varied depending on the orientation of the investigation. Holder and Brennan in the work The International Legal System[3] propose four possible meanings for sovereignty. The possibilities vary from the suggestion that sovereignty is the ability to act with unlimited unilateral competence, unfettered by any authority including international law to the possibility that sovereignty is equivalent to international legal personality, which is of limited value because it creates a tautology--in order to be a sovereign the entity must be recognized as an international person but in order to be an international person the entity must be sovereign.[4]

D. P. O'Connell[5] states that sovereignty is a term describing a political entity possessing plenary competence to perform the required acts under international law. A further qualification is that a sovereign state is one which is not subordinate in its capacity of international action to any other state. This does not mean that there are no obligations either to another state or international organization but rather that the state in question is still capable

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[3]Holder and Brennan, The International Legal System, 211 (1972).

[4]Mazer, supra, n. 2, 5.

[5]O'Connell, supra, Ch. II, n. 72, 283-285.

of fulfilling its obligations. O'Connell enunciates what he feels the qualifications of a sovereign state are.

> The state must be an organized community, which implies a population occupying a defined community, which it asserts to be exclusive to it and which it administers through governmental agencies competent to deal with foreign states in the way accepted as normal by the international community.[6]

Competence to deal with foreign states in a way accepted as normal by the international community does not mean freedom from legal restraints. On the other hand, it is not the quantity of legal restraints which determines sovereignty or alternatively the loss of sovereignty, but rather it is the quality of the restraints to which a state is subject which should be the determining factor.[7] The examination should be to ascertain how certain restraints or commitments affect the supreme law-making and law-enforcing authority in a particular state.[8] This acknowledges the interdependence of nations or, in some cases, the dependence of some on others, militarily, politically or economically. Clearly then a state could be restricted by commitments to another state in any area of foreign or domestic policy and still be

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[6] Id., at 284.

[7] Morgenthau, Politics Among Nations, 303-305 (4th ed. 1967).

[8] This refers to the phraseology employed by Jean Bodin in De Republica (1577), where he stated that "a state without a summa potestas (supreme sovereign authority) would be like a ship without a keel." Mazer, supra, n. 2, 1-2.

sovereign. This could occur only when the authority of that state under international law to act as it chooses still exists. This means that qualitatively the state has not fettered itself to the point it is not competent to exercise its authority but quantitatively, it has limited the number of alternatives from which to choose in its policies or actions.

Case law has its limitations with regard to defining sovereignty. The reason for that is the claims which are usually brought for judicial decisions deal with a specific aspect of the entirety of a claim of sovereignty. In the Customs Regime Between Germany and Austria[9] the contentious area was a customs union between the two countries. As a result the court dealt with sovereignty from the international aspect.

> . . . independence may also be described as sovereignty (suprema potestas), or external sovereignty, by which is meant that the State has over it no other authority than that of international law.[10]

The question which is left unanswered by this is whether a state must be totally independent in order to be sovereign. Bearing in mind the above, it is somewhat unrealistic to equate sovereignty and independence because it must be acknowledged that the extremely complex system of interrelationships

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[9]Customs Regime Between Germany and Austria, Permanent Court of International Justice Advisory Opinion, 1931, P.C.I.J. Ser. A/B, No. 41, see Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 156.

[10]Id., at 157.

among states today are such that no state is completely independent. The case law can also be employed to support that point of view as well. Viscount Finlay, in Duff Developments Co. Ltd. v. Government of Kelantan,[11] acknowledges that in order to have sovereignty, a state must possess some independence but that there need not be total independence. However there is also some difficulty in Viscount Finlay's discussion because he continues to say that a state which has, by treaty or other agreement, contracted out the conduct of its foreign affairs may still be sovereign. It is difficult to envisage a situation where a state, which does not conduct any foreign affairs, would be recognized as still being sovereign.[12] In the Island of

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[11] Duff Developments Co. v. Government of Kelantan, [1924] A.C. 797. See Id., at 158

[12] Support for this may be found in the case of India prior to Independence in 1947. Great Britain, by treaty, had the right to protect the Indian States from aggression, administer their foreign affairs and supervise internal administration. The individual states had virtually total control within their territories but still were the responsibility of Great Britain. Because Britain conducted the foreign affairs for the Indian states and because they were ultimately controlled by Great Britain, they were not sovereign. Morgenthau, supra, n. 7, 307.

It should be pointed out that the Liechtenstein case could be used as an example in refutation that a state which does not conduct its own foreign affairs is not sovereign. Liechtenstein was denied membership in the League of Nations in December, 1920, because in the opinion of the League it could not discharge the international obligations imposed on it by the Covenant. The reasons given for this incapacity were that Liechtenstein had contracted out to other states the control of its customs, diplomatic representation of its subjects in foreign countries, final decisions in some judicial matters and Liechtenstein had no army. In 1949 Liechtenstein was made a party to the Statute of the International

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Palmas case[13] sovereignty was again equated to independence. However the difference in this case is that the emphasis was on territorial sovereignty because that was the nature of the claim between the Netherlands and the United States.

Since there is a certain amount of difficulty in ascertaining a proper legal framework with which to handle the question of Canadian sovereignty in light of the two-key arrangement, one will be presented as a focal point for discussion and variations from that definition will also be examined. The definition of sovereignty which will be referred to is:

> . . . [s]overeignty . . . is the ability, in a state, to determine its own destiny, both internally and externally, free of subordination by any legal restraints or interference imposed without its consent by any other state or international actor.[14]

This means that a state will not necessarily be sovereign if all restraints or interference are imposed with its consent. After ascertaining whether the restraints were agreed to by the state in question, it must be decided whether those

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[Continued from p.102]
Court of Justice. It was recognized in both instances, that Liechtenstein was a sovereign state. Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 155.

The one thing that the conflicts between the two different examples illustrates is the limited value of the cases because they are based on individual fact situations.

[13] Island of Palmas Case (United States v. The Netherlands) Permanent Court Arbitration, 1928 2 U.N. Rep. International Arbitration Awards 829. See Castel, International Law, 49 (3d ed. 1976).

[14] Mazer, supra, n. 2, 12.

restraints are of such a severity as to cripple the state's ability to control its own destiny.

The two-key arrangement by which Canada obtained nuclear weapons was one in which the weapons were American property and were in American custody until the President of the United States released them to Canada. From that point the weapons would be Canada's, to decide whether to employ them or not. Basically the restriction arises only as to the release of the weapons initially. The United States can only control Canada's actions in the sense that the President has an initial veto as to the use of the weapons. The President cannot legally force Canada to use the weapons;[15] he can only restrict Canadian employment of them in the first instance when the release of them is necessary.

There is no question that Canada agreed to this restriction because this term was one in the treaty signed on August 16, 1963.[16] However the issue of the nature of this limitation creates some question. If it can be said, for example, that by this treaty Canada was not capable of properly defending itself, which is an inherent duty or responsibility of a sovereign state, then the proper

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[15]Although the argument can be made that NORAD or NATO can dictate the use of these weapons. This is a distinctly different question because it deals with sovereignty and regional and international organizations.

[16]This is a presumption that the two-key arrangement was a part of the agreement in question. Since the agreement is still considered classified, one cannot have access to it. However there is support for this presumption. See Ch. V, n. 68, n. 69.

conclusion would necessarily be that Canada had lost its sovereignty. There are two aspects to this question. The first is whether Canada had in effect no control over the nuclear weapons by reason of the treaty and the second question is whether the restriction was of such a nature as to render Canada incapable of fulfilling the function it must necessarily fulfill as a sovereign.

The first question has been answered above. The United States, through the office of its President could restrict Canadian control over the nuclear weapons. It is difficult to say that Canada had no control over the weapons but it is certain that Canada could not exercise the control it did have, the decision ultimately whether or not to employ the weapons, until weapons were released to Canada. From that viewpoint there seems no doubt that Canada was subject to American legal restraint.

That being so, the examination must now be directed to the second question: was this restriction significant enough to render Canada incapable of fulfilling the function of a sovereign state? The sovereign function in question is that of defending its territory, the lives of its citizens and fulfilling the international obligations to which it was committed. Clearly an important aspect of defence in the 1960's was that of nuclear deterrence but it was not at all the only method of defence. The threat of nuclear attack, though a possibility, was not the only imminent danger as far as warfare was concerned. Certainly the USSR was viewed as a nuclear menace but at that time there were no other probable

enemies possessing that capability. It can also be argued that through this arrangement Canada was, in fact, providing the best defence possible given the existing situation and capabilities.[17] In any case even though the defence of Canada could be legally restricted by the President of the United States, this restriction could only curtail one aspect of the entire system of defence of Canada. Before this treaty Canada was defended by what was considered an adequate system of conventional weapons and treaty arrangements with the United States, so that the imposition of a restriction on a capability, which Canada did not, until this time, have, cannot be viewed as crippling its ability to defend itself.

The question of Canada being restricted from fulfilling its international obligations is in reality a non-issue. This is so because the nature of those obligations were such that Canada was to accept the nuclear weapons subject to the two-key arrangement. By doing so, Canada was fulfilling those international obligations which, as a sovereign state, it was obliged to. Therefore it can be concluded that, although the two-key arrangement did not permit Canada total freedom of action, it did not render Canada incapable of determining its own destiny, or fulfilling those functions which it, as a sovereign state, must fulfill.

2. The Commitment to Accept Nuclear Warheads

One of the more interesting legal questions which

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[17] It was not possible on the short term and not at all desirable from the viewpoint of those in the government for Canada to manufacture its own nuclear weapons.

arose from the entire nuclear weapons controversy is related to the actual existence and nature of the commitment the Diefenbaker government had made on behalf of Canada. The first question which should be answered is whether there were any commitments on behalf of Canada to accept the various nuclear roles in NATO and NORAD. There was some disagreement among the political parties during the 1963 election campaign as to the existence of the obligations to arm the Canadian weapon systems with a nuclear arsenal.[18]

(1) Oral Agreement

The treaties[19] involved in the nuclear weapons controversy do not clearly enunciate that Canada was committed to possess nuclear weapons. In NATO the nearest thing to a treaty committing Canada to nuclear weapons was the Final Communiqué of the Paris meeting of the heads of government of the NATO countries, December 19, 1957, which stated that NATO was to adopt a nuclear posture.[20] Although this communiqué was signed by Prime Minister Diefenbaker on behalf of

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[18]The NDP were split on the question of whether Canada had committed itself to a nuclear posture. The Liberals argued that Canada was committed to the nuclear weapons, while the Progressive Conservatives denied any obligation to accept nuclear warheads in Canada but admitted to a commitment of a nuclear role for NATO, by implication at least. However the Conservatives also maintained the position that the NATO arrangement may be subject to change because of the Nassau decisions. Lyon, supra, Ch. IV, n. 12, 192.

[19]Supra, Ch. IV.

[20]Supra, 65.

Canada, and it would be inherent in the new nuclear posture that there be new roles for some of the forces in NATO which would include nuclear weapons, it does not appear that Canada was party to any written treaty committing Canada to the possession of such weapons. Perhaps the argument can be put forth that there was an oral agreement[21] to such an effect. The evidence for this comes from the fact that Canada was asked to assume the "strike-reconnaissance" role for NATO and had accepted the role.[22] The NATO Commander had briefed the Cabinet on strike-reconnaissance and a year later the Minister of Defence, G. R. Pearkes announced the CF-104 was selected as the aircraft for strike-reconnaissance. The inference can be made that there was a consensus that Canada had agreed to the NATO request. This can be further supported by the statement made by Prime Minister Diefenbaker to the House of Commons on January 25, 1963 to the effect that there was no misunderstanding about the Canadian government undertaking the role of strike-reconnaissance for NATO.[23] However the difficulty arises from the fact that there is no concrete evidence of an oral agreement. It may be difficult to pursue the argument that an oral treaty was agreed to without any further evidence, which is the difficulty with any oral treaty, but there certainly

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[21]The validity of oral agreements is discussed. Supra, Ch. II, n. 72.

[22]Supra, 66.

[23]Supra, 75.

is enough factual support for the inference initially to be made.[24]

A similar argument can be constructed for the Canadian commitment to NORAD. The philosophical basis of NORAD was that of nuclear deterrence, in order to counter the threat of nuclear attack from the Soviet Union. Canada obviously recognized this from the outset because in the letter from N. A. Robertson, Canadian Ambassador to the United States, to J. F. Dulles, Secretary of State of the United States, which formed part of the NORAD treaty, it states:

> . . . [t]he advent of nuclear weapons, the great improvements in the means of effecting their delivery, and the requirements of the air defence control systems demand rapid decision to keep pace with the speed and tempo of technological developments. . . . It was essential, therefore, to have in existence in peacetime an organization, including the weapons, facilities and command structure which could operate at the outset of hostilities in accordance with a single air defence plan approved in advance by national authorities.[25]

The inference can be made that Canada as a partner would be expected to "keep pace with the speed and tempo of technological developments" by having the appropriate weapons, which would include nuclear warheads. Furthermore it becomes more evident that Canada was to take a nuclear role in NORAD after the Prime Minister announced four months later that the

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[24]Reference can also be made to the statement of General Norstad to the Press in Ottawa on January 3, 1963. Supra, 68.

[25]Canada Treaty Series 1958/9, 2.

Bomarc-B missile system was being incorporated into the Canadian Air Defence Command.[26] Although it was theoretically possible for the Bomarcs to be armed with conventional weapons, it would be unrealistic to assume that this was the plan because the conventional warheads were far less efficient armed that way, the conventional warheads were more expensive and there was never any design for such a warhead. As with the NATO Communiqué, this agreement was not specific regarding the use of nuclear warheads for the Bomarcs but it would not seem unreasonable to expect this was what had been contemplated when the United States agreed to pay for and supply the ammunition for the missiles.

One further point can be made with regard to the Bomarcs. If the point of NORAD was to provide an adequate air defence system, reflecting the nuclear age, then it would seem ridiculous to have no armaments for the missiles at all, as was the case during the Cuban missile crisis. Although the missiles were installed by that time, they did not have any warheads, which rendered them totally useless during the tense international dispute between the Soviet Union and the United States. Clearly at that time, nuclear warheads would have been available for the Bomarcs because that was the method of armaments employed in the United States. There were no conventional armaments even in the design stage for

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[26] Supra, 70.

the Bomarc.[27]

(2) Customary International Law

An argument can be made that there was a legal obligation on Canada's behalf to accept the nuclear warheads on the basis of customary international law. There is no doubt that custom is considered as a source of international law and, as a result, obligations can be construed from it, if, of course, the claim meets the criteria necessary to have a valid custom. At first glance it would seem inappropriate to even mention custom with regard to the U.S.-Canadian or NATO arrangements because the area in question is so localized. Custom is most often thought of in the sense of universal or near universal acceptance of a particular mode of conduct. However this is what is referred to as general custom,[28] which can be distinguished from special custom. Special, or particular or regional, customs are those which arise to deal with situations on a limited geographic area or topics of customs which are by their nature non-generalizable.[29] It is this special custom, which may be applied

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[27]This same argument cannot and is not made regarding the CF 101B (Voodoo) aircraft for NORAD. The aircraft were initially armed with conventional rockets, but would have been more efficient had they been nuclear-armed, supra, 70.

[28]Waldock, "General Course on Public International Law", Friedmann, Lizzitzyn and Pugh, supra, Ch. III, n. 27, 35; D'Amato, "The Concept of Special Custom in International Law" (1969) 63 Am. J. Int. L. 212-213.

[29]D'Amato, supra, n. 28, 213. Example of special customs are examined throughout the article.

to the situation which existed regarding the Canadian nuclear situation.

Since there are the two different types of custom in international law, it would seem likely that the requirements for the two would be different. This is the case. The requirements for a claim of special custom are more difficult to fulfill. The major difference between the two types of custom is the burden of proof required to support such a claim.[30] When a general custom is invoked, after the custom is established, it binds all States which have not opposed the custom. It does not matter that they have not assisted in its formulation or have necessarily actively followed it. Therefore the state seeking to rely on the custom need only show the existence of the particular custom and not necessarily the acceptance of it by the other State. This acceptance will be presumed, and the burden then lies on the second State to produce evidence of its opposition to it, in order not to be bound.

The requirements for a special custom are more stringent because of the nature of the claim. Since the custom may be a derogation of the general law and has limited scope and application, it would be more difficult for the court to conclude that there is a form of binding obligation without greater evidentiary requirements than with a general custom. The burden of proof for a special custom is enunciated in the

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[30] Waldock, supra, n. 28, 35.

Asylum case this way,

> The Party which relies on a custom . . . must prove that this custom is established in such a manner that it has become binding on the other party . . . that the role invoked . . . is in accordance with a constant and uniform usage practised by the States in question. . . .[31]

There is no presumption that, having established the special custom, the states involved have accepted it. In order to establish a special custom, it must be shown that the practise in question has in fact been accepted as binding by the other party or parties.

There is no minimum state requirement for a special custom, other than that there must be two parties. Clearly if the number of states involved became quite large it would lead to the conclusion that perhaps the custom was now a general rather than a specific one. However it is equally apparent that a custom may exist even though there may only be two states involved in the particular practice.[32]

Another requirement which must be met in order to establish a special custom (and a general custom) is duration of time. There is no strict minimum of time

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[31] 1950 I.C.J. Rep. 266 at 276-277. See Brownlee, Principles of Public International Law, 6-7 (2nd ed. 1973).

[32] This is clear from a statement of the Court in the Right of Passage Case [1960] I.C.J. Rep. 4 at 39:

> [t]he Court sees no reason why long continued practice between the States accepted by them as regulating their relations should not form the basis of mutual rights and obligations between the two States.

necessary for a custom to develop. In the Right of Passage Case[33] the time considered was over 125 years. However in the North Sea Continental Shelf Cases,[34] the position is put forward that the passage of a short period of time is not necessarily, or of itself, a bar to the formulation of a custom in international law; but rather what is important is that, during that relatively short space of time, the State practice of those states concerned must have been extensive and virtually uniform according to the practice which is to be a custom. As well there must be evidence that there is a general recognition that there is a legal obligation involved, not just a courtesy or a tradition. Brownlee[35] points out that the duration of time need not be considerable and cites the rules relating to airspace and the continental shelf as examples of customary law which have matured after a fairly short period of time. It should also be recognized that the time factor cannot be as relevant a determining factor as it used to be simply for the reason that technological developments (such as air and space travel and telecommunications) are developing so rapidly that time becomes more important in the sense of the necessity of establishing

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[33]Case Concerning Right of Passage Over Indian Territory (Merits) (Portugal v. India) International Court of Justice, [1960] I.C.J. 6. See Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 55.

[34]North Sea Continental Shelf Cases (Federal Republic of Germany v. Denmark) (Federal Republic of Germany v. Netherlands), [1969] I.C.J.--, Id., at 60.

[35]Brownlee, supra, n. 31, 6.

agreed upon practices. It is acknowledged that in many instances these types of developments are handled through treaty and international convention, which facilitate quicker and more accurate agreement. However this does not alter the fact that customary international law may be developed, especially in dealings between nations close geographically and politically.

As was mentioned above, one of the more important requirements for a special custom is the uniformity or consistency of practice. Since there is no presumption of acceptance of the particular custom in question, it must be necessary to show that the States involved have consistently followed the practice. This becomes especially important when the period of time for the evolution of the custom is short. Clearly, a uniform usage or consistency of practice is an essential element in the development of a special custom.[36]

The final requisite component of special custom is the legal obligation. This requirement also arises by necessity because of the absence of the presumption in special customs. Brownlee states that:

> . . . the proponent of the special right has to give affirmative proof of a sense of obligation on the part of the territorial sovereign. . . .[37]

The reason for showing obligation is basically two-fold.

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[36] North Sea Continental Shelf Cases, supra, n. 34, 61; Asylum Case, supra, n. 31

[37] Brownlee, supra, n. 31, 10.

The first reason is a direct result of the interpretation of Article 38(1)(b) of the Statute of the International Court of Justice which states:

> 1. The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:
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> . . . . . .
>
> (b) international custom, an evidence of a general practice accepted as law. . . .[38]

Unless there is a sense of obligation to follow a certain practice the custom cannot be interpreted as being accepted as law. The second reason that obligation must be introduced as a pre-requisite to special custom is there are a number of international actions such as protocol and ceremony, which are performed because of a sense of tradition, courtesy or convenience but not by any sense of legal duty.[39]

It remains to be seen whether special custom as a source of international law can be applied to the factual situation surrounding the contentious topic of Canadian obligations to accept nuclear weapons.

The method used to analyze the possibilities of a special custom of international law shall be to, first, state what the specific custom is which is applicable and then to analyze the facts of the Canadian-American situation from the standpoint of the four requirements of specific custom

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[38] Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 1191.

[39] North Sea Continental Shelf Case, supra, n. 34, 61.

mentioned above: the number of states adhering to the custom; the duration of time it has been followed; the consistency of the practice and the sense of obligation on the part of the States in question.

The custom which is being considered is related to the practice of making commitments, especially for defence purposes, on a very informal basis. The point is that there is no written document or at best an exchange of letters, which is the method employed to handle the relations between the countries. If this is viewed as a specific custom, it would be a source of international law and therefore a legally binding commitment. To reiterate, the custom being proposed is the very informal method of international relations, with respect to defence arrangements, employed in the stead of more traditional methods such as bilateral and multilateral treaties.

The first requirement to be dealt with is the number of parties involved with the specific custom. In this instance the parties concerned are the United States of America and Canada. As was illustrated above there is no minimum number of States necessary for a custom to be valid, except of course for the provision that there must be at least two states, for any form of international intercourse. This is a rather simple method of disposing with the first criterion of specific custom, but it must be borne in mind that, by its very nature, specific custom will involve a relatively small number of states.

The second requirement, duration of time, must be dealt with in a more complex manner. The precise number of years involved is not an issue but rather what is important is the relative time the two states have followed the practice. The precise year that this practice between Canada and the United States will not (and in all likelihood can not) be pinpointed. However the relevance of that fact is not great in the light of the fact the practice can be shown to have been followed for at least twenty years prior to the incident in question. Canadian-American defence relations have been carried on to a large extent through the network of informal relationships, particularly through the usage of the exchange of notes.[40] This is especially prevalent in the NORAD alliance where the informality goes beyond the exchange of notes and includes unilateral instructions from the governments to their respective armed services.

Moreover, evidence of the informal practices between Canada and the United States can be adduced from A. E. Gotlieb's study of Canadian treaty-making.[41] During the period of time between 1947-1965 almost 83% of all the agreements concluded between Canada and the United States were in the form of

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[40]Cohen, "Canada-United States Treaty Relations--Trends and Future Problems", Deener, Canada-United States Treaty Relations, 192 (1963).

[41]Gotlieb, "Canadian Treaty-making: Informal Agreements and Interdepartmental Arrangements", Macdonald, Morris, Johnston, Canadian Perspectives on International Law and Organization, 229-243 (1974).

exchanges of notes.[42] Gotlieb points out that there are a great number of less formal methods of international arrangements, including the use of interdepartmental arrangements.[43] The difficulty is that it is not easy to obtain evidence of such practices, however he does point to examples that the practice does exist. Another problem with interdepartmental arrangements is that they often are not listed in the Canada Treaty Series or the Treaty Register of the Department of External Affairs (which is not published) because they are not binding in international law.[44] However these informal arrangements may well be binding in international law, if the agreements have the approval of an Order in Council or the Secretary of State for External Affairs.[45] In that case the arrangements would usually be listed in the Treaty Register, but not necessarily listed in the Canada Treaty Series. Even that is subject to less formal arrangements.

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[42] Id., at 230. This pattern has been maintained in approximately the same proportion through to 1970. Id., at 231. It should be noted that the ratio for treaties between Canada and all other countries, other than the United States for the years 1947-1965 was 65% exchange of notes, substantially lower than between Canada and the United States. Even more illustrative is the statistic that between 1966 and 1970, exchanges of notes comprised only 38% of all bilateral treaties between Canada and all countries other than the United States. Id., at 232.

[43] Id., at 238.

[44] Id.

[45] Id., at 240.

> Given the international competence or responsibility of a specific minister of the crown, it is to be expected that the departments or agencies for which they are responsible would from time to time have occasion to enter into less formal international arrangements.[46]

Gotlieb concludes by saying that there is substantial evidence that federal departments make many international arrangements on an informal basis. This practice has been going on for the past fifty years and appears to be continuing.[47]

Therefore the question of duration of time of the practice of informality regarding defence arrangements with the United States can be answered in the affirmative in the sense that the practice had been used for at least thirty-five years prior to the Bomarc and Voodoo issues for NORAD.

The next requirement which must be dealt with is that of consistency. The answer to the consistency question can also be found in the Gotlieb article. It may be noted firstly that the informal method of international arrangements is not and never was considered the only method of carrying on international relations so that the consistency question should not be framed in the sense of being the only method followed in every instance of international affairs between Canada and the United States with regard to defence. Rather the issue should be; was this practice continued to relatively

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[46] Id.

[47] Id., at 242-243.

the same degree over the period of time in question? It would not be realistic to expect that in every instance of defence arrangements between Canada and the United States the informal methods would be used. The reason for that is simply because no one particular method is employed in every instance. The consistency should arise when a method is used sufficiently often that a pattern for its employment may be seen. Gotlieb illustrates statistically[48] and experientially[49] that there was a consistent tendency for Canada and the United States to take care of much of their international arrangements through informal methods. Furthermore it has been illustrated that a great deal of the U.S.-Canadian relations with regard to defence follow this pattern.

The final and most important requirement for specific custom is the sense of obligation. The countries must feel that the practice in question leads them into binding obligations in international law. The answer to this question can be found by examining the practice from two perspectives. The first is to approach obligation in the same method that Gotlieb did.[50] This practical approach is that the civil service and the executive of the government view all informal arrangements that have approval of an Order in Council or the

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[48] Id., at 231.

[49] Id., at 238-240; 242-243.

[50] Supra, n. 41

Secretary of State for External Affairs as binding in international law. The evidence of obligation comes from the fact that the External Affairs Department would be involved in international arrangements, especially to do with defence.[51] As well, it is difficult to believe that any arrangements between Canada and the United States respecting defence, a matter of national security and ultimately existence, would be entered into without a sense of obligation. Without the obligatory aspect, there would seem no purpose in the arrangements since there would be nothing upon which to rely.

Obviously the obligation requirement is not simply an objective analysis. As with any intention question one must look to the actions, statements and the surrounding circumstances. This is the second perspective from which to examine the obligation question. Although the commitment on Canada's behalf to accept the nuclear warheads for the NORAD nuclear weapon systems was never spelled out in a formal treaty, it is hard to believe that the United States would have placed the Bomarc squadrons in Canada, at their own expense, if they

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[51]This is implicit by the very nature of the arrangements. Since the dealing with the United States to do with defence are of themselves an important aspect of external relations, it is incomprehensible that external affairs would not be a party to any negotiations. Further evidence of external affairs involvement can be construed from the fact that NORAD was officially established by an exchange of notes, written on behalf of Canada by the Canadian Ambassador to the United States, who is a part of the external affairs department.

were not certain that Canada was committed to arming the missiles. Similarly it is inconceivable that Canada would have accepted the Bomarcs, with the intention of leaving them unarmed. That would not have been a rational and advantageous move on Canada's part. Furthermore the reason there was not any formal written agreement for the acceptance of the warheads was that Canada's willingness to accept them for the weapons systems was clearly implied by Canadian actions, public announcements and private discussions between officials.[52]

There are admitted difficulties with the analysis of the requirements for a specific custom dealing with the fact situation in question. The most prominent of the difficulties is the absence of concrete fact to substantiate some of the claims that the facts fit into the necessary requisites. However it must be remembered that the facts in question are by their very nature confidential, thereby denying much access to the material upon which the claims must rest. Obviously if the matter were to be argued before the International Court of Justice many of the facts would be made available for that purpose, but in instances such as this examination it can only be inferred or presumed that these materials do exist.[53]

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[52] Lyon, supra, Ch. IV, n. 12, 81.

[53] Mr. Gotlieb, who was with External Affairs from 1957 to 1968 and has served as the Deputy Minister in the Departments of Communications and Manpower and Immigration, found difficulties in obtaining evidence to substantiate some of his observations. Gotlieb, supra, n. 41, 238; 243.

If, of course, the factual claims prove to be inaccurate, the claim of specific custom may, but not necessarily, fall.

If the requirements for the assertion that there is a specific custom between Canada and the United States with regard to informal defence arrangements are met, then the conclusion is inevitable that a source of international law has been created. It follows then that, assuming the situation regarding the nuclear warheads falls within the purview of this custom, a binding international commitment on the part of Canada exists.

(3) The Nuclear Test Cases

The sources of international law have been quite limited in past.[54] There may have evolved another possible source of international law in the last few years. This

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[54]Article 38(1) of the Statute of the International Court of Justice lists four sources of international law:

> a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
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> b. international custom, as evidence of general practice accepted as law;
>
> c. the general principle of international law recognized by civilized nations;
>
> d. subject to the provision of Article 59 [which denies the application of stare decisis], judicial decisions and the teachings of the most highly qualified publicists of the various nations. . . .

Supra, n. 38.

may be derived from the Nuclear Test Cases[55] between Australia and France and between New Zealand and France. In the case it was held that statements made by officials of the French government, particularly the Head of State and the officials acting under his authority,[56] to the effect that France would cease atmospheric nuclear testing after 1974, created a binding legal obligation in international law.[57] The Court provides a clear and concise statement of what the law is and what requirements are necessary.

> It is well recognized that declarations made by way of unilateral acts, concerning legal or factual situations, may have the effect of creating legal obligations. Declarations of this kind may be, and often are, very specific. When it is the intention of the State making the declaration that it should become bound according to its terms, that intention confers on the declaration the character of a legal undertaking, the State being thenceforth legally required to follow a course of conduct consistent with the declaration. An undertaking of this kind, if given publicly, and with an intent to be bound, even though not made within the context of international negotiations, is binding. In these circumstances, nothing in the nature of a quid pro quo, nor any subsequent acceptance of the declaration, nor even any reply or reaction from other States, is required for the declaration to take effect. . . .[58]

Clearly then, the requirements for this source of law are that there must be a declaration(s) made by way of unilateral

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[55] Nuclear Test Cases (Australia v. France) I.C.J.R. 1974, 253. Nuclear Test Cases (New Zealand v. France) I.C.J.R. 1974, 457. Reference to specific paragraphs will be given only from the New Zealand v. France report.

[56] Id., at S. 51.

[57] Id., at S. 53.

[58] Id., at S. 46.

acts. These declaration(s) must concern legal or factual situations, must be given publicly and must exhibit an intention to be bound.

The first four requirements are not difficult to prove based on factual situations. The fifth and final requirement, intention to be bound to the unilateral declaration, creates problems. On the topic of intention, the Court states that not all unilateral acts imply the necessary obligation and that:

> . . . the intention is to be ascertained by interpretation of the act. When States make statements by which their freedom of action is to be limited, a restrictive interpretation is called for.[59]

The Court further points out that there are no prescribed forms which, if followed correctly, will create the binding obligations. There is no necessity that the statement even be in written form. The only important requirement, as regards intention is that the language used in the declaration reveals a clear intention.[60] The implications of this description of intention to be bound are very wide, but still ambiguous. There seems to be no freedom to examine the surrounding circumstances but, rather, only the language of the unilateral act or declaration. The Court did examine a number of statements by French officials but also examined statements made by New Zealand and even statements made

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[59] Id., at S. 47.

[60] Id., at S. 48.

subsequent to the oral proceedings.[61] Therefore one could conclude that the surrounding circumstances may be relevant in interpreting the words and intention of the unilateral act or acts in question. The question of intention is still to be a subjective evaluation and, as such, is still fraught with difficulty as to predictability. However, as with other subjective questions of law, some conclusions must be interpreted from the given fact situation, always bearing in mind that should a court not reach the same interpretation, the result could very well be different. Unless this is done there is no point in attempting to discuss international law and its implications on factual situations of any sort, except those fact situations already judicially decided.

It is appropriate to now apply the "Nuclear Test Cases rule" to the facts surrounding the question of acceptance of nuclear weapons for Canada. With regards to Canada's NATO weapons systems it was announced by the Minister of National Defence that the Starfighter aircraft had been chosen to fill the role of strike-reconnaissance.[62] Also, nearly a year later it was further announced that the Canadian army brigade in Europe would be armed with Honest John surface to surface missile.[63] The situation with regard to NORAD is very much the same as that for NATO. Prime Minister

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[61] Id., at S. 34; S. 37.

[62] Supra, 66.

[63] Supra, 66.

Diefenbaker announced the acquisition of the Bomarc-B in September of 1958 and the Voodoo aircraft was obtained in June 1961.[64]

Clearly those are not the statements upon which the Nuclear Test Cases rule would be invoked but rather are a brief summary of the background. The contentious area is that of arming the systems with nuclear weapons. It has been suggested that because of the type of weapons systems which Canada had adopted and because of the public statements of the Prime Minister, there was a clear implication that a decision had been made that Canada would accept nuclear weapons for both the NORAD and NATO systems.[65] The Prime Minister's statements are the important points for examination.

One such statement was made on February 20, 1959 in the House of Commons,

> The full potential of these defensive weapons is achieved only when they are armed with nuclear warheads. The government is, therefore, examining with the United States government questions connected with the acquisition of nuclear warheads for Bomarc and other defensive weapons for use by the Canadian forces in Canada, and the storage of warheads in Canada. Problems connected with the arming of the Canadian brigade in Europe with short range nuclear weapons for NATO's defence tasks are also being studied.
>
> We are confident that we shall be able to reach formal agreement with the United States on appropriate means to serve the common objective.

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[64] Supra, 70-71.

[65] Lyon, supra, Ch. IV, n. 12, 81.

> . . . It is our intention to provide Canadian forces with modern and efficient weapons to enable them to fulfil [sic] their respective roles.[66]

Mr. Diefenbaker is initially speaking about the Bomarc missiles.

This statement by the Prime Minister fulfills all the requirements of the Nuclear Test Cases. Clearly this was a declaration made by way of a unilateral act. The topic of the statement was definitely one of a factual nature and the statement was made publicly. Although the place of the statement was the House of Commons, it cannot be said that a statement made by the leader of the government in the seat of the government is not public, especially since there is press coverage and an accessible record of the proceedings. The intention necessary to create a binding obligation may be inferred from the Prime Minister's statement. Once he has acknowledged that the weapons are fully effective only when armed with nuclear warheads, Mr. Diefenbaker states that it is his government's intention to provide the Canadian forces with "modern and efficient weapons" for their roles in NATO and NORAD. It is not difficult to infer from those two segments of the same statement that it was Canada's intention to arm the systems with nuclear weapons. As far as the intention to be bound is concerned that answer seems to be in the affirmative because he is speaking of his government's intention and progress in unambiguous terms. If there were no

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[66] (1959) H.C. Deb., 1223.

intention to be bound the statement would have been couched in phraseology which would permit doubt about the Canadian position.

A similar argument can be made regarding the statement to undertake the strike reconnaissance role for NATO. In recalling this obligation to the House of Commons on January 25, 1963, the Prime Minister stated:

> [w]hile nothing was specified about arming the aircraft with nuclear weapons it was realized by all that this would be desirable that nuclear weapons should be available as and when required, under joint control, in NATO stockpiles in accordance with the general NATO decision of December 1957. . . .[67]

Therefore according to the Prime Minister's interpretation, Canada clearly had the intention to arm the aircraft with nuclear weapons. Since this intention was there when it was announced that Canada had undertaken the strike reconnaissance role for NATO, the conclusion can be made that there was an intention to be bound when the statement was made.

Since the requirements for an international obligation, according to the Nuclear Test Cases, have been fulfilled, the obligation under international law must then be real. The time of the obligation must be considered to be when the statements were made, because there is no requirement for other states to accept the declarations as binding.

There are still problems with this analysis of a source of international law. The first is the amount of

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[67](1962-63) 3 H.C. Deb., 3128.

recognition which has been given the rule of law enunciated in the Nuclear Test Cases. Although the Court states that this principle of law is well recognized, it is not clear from the case that it is indeed a well recognized principle. Perhaps the source of law is not really new in the sense that it may have been created in 1974, although the inference may be made that it is, from the method that Professor Castel deals with it.[68] Perhaps the interpretation should be that the rule of the Nuclear Test Cases is really one of the general principles of law recognized by civilized nations.[69] Justification for this may be found in the statement of the Court.

> One of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith. Trust and confidence are inherent in international co-operation, in particular in an age when this co-operation in many fields is becoming increasingly essential. Just as the very rule of "pacta sunt servanda" in the law of treaties is based on good faith, so also is the binding character of an international obligation assumed by unilateral declaration. Thus interested States may take cognizance of unilateral declarations and place confidence in them, and are entitled to require that the obligation thus created be respected.[70]

The implication is that the case rests on good faith, which

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[68]Professor Castel mentions the Nuclear Test Cases in a note following "Auxiliary Sources of International Law". Castel, supra, n. 13, 27.

[69]Article 38 (1) (c) of the Statute of the International Court of Justice. Supra, n. 54.

[70]Nuclear Test Cases, supra, n. 55, S. 49.

as the court says is one of the basic principles of law.

Obviously, in order for a general principle to be a source of international law, it must be one that is recognized by civilized nations. This prerequisite does not mean that it be universally accepted but rather that it be a principle that "pervades the municipal law of nations in general."[71] There does not seem to be too much question that good faith is accepted as a principle of most nations.

There is one further difficulty with the concept of general principle of international law. It is the question of the origin of the principle. The authority for the precept of good faith can be traced to the municipal law of nations. Even further, one can justify it from a jurisprudential viewpoint in the sense that without good faith law cannot function orderly or predictably. However that is still not authority. The reason authority is difficult to ascertain is that there really is none. This does not preclude the use of a general principle because the problem is recognized and accepted.

> In every uncodified legal system there are certain elementary and universally agreed principles for which it is almost impossible to find specific authority. In the Common Law of England and the United States of America, where can you find specific authority for the principle that a man must perform his contracts? Yet almost every decision on a contract presupposes the existence of that principle. The same is true of international law.[72]

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[71] Mann, "Reflections on a Commercial Law of Nations", Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 73.

[72] McNair, "The Law of Treaties 493 (1961)", Friedmann, Lizzitzyn and Pugh, supra, Ch. III, n. 27, 328.

It is therefore proposed that the Nuclear Test Cases rest upon the principle of good faith, one of the general principles of law recognized by civilized nations. This being true, the conclusion is that it is a source of international law, which creates binding obligations.

3. The Consequences of a Breach of an International Obligation

The discussion has focused on alternative legal principles which may be interpreted, along with the facts of the nuclear weapons controversy in Canada, as creating a legally binding commitment on behalf of Canada to accept the nuclear weapons for the NATO and NORAD contingents. The logical question which should follow is what are the consequences of a breach of an international obligation. This question is far too complex to deal with in any detail in this discussion. However it will suffice to briefly mention another general principle of international law, which will provide a simplistic answer. The principle is pacta sunt servanda. The Permanent Court of International Justice enunciated pacta sunt servanda by stating that it was

> . . . a principle of international law that the breach of an international engagement involves an obligation to make reparation in an adequate form. Reparation . . . is the indispensable complement of a failure to apply a convention and there is no necessity for this to be stated in the convention itself.[73]

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[73] Chorzow Factory Case (Jurisdiction) P.C.I.J., Ser. A, No. 9, at 21 (1927), Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 328.

Pacta sunt servanda is also based on the premise of good faith. The implications of the principle are that once a state has undertaken an international obligation it must perform the obligation in good faith.

4. The Effect of the Change in Government

The final legal issue with regard to the nuclear weapons controversy deals with the question of continuity and change of government. The issue is whether the Liberal government, under Prime Minister Pearson, which succeeded the Progressive Conservatives, was obliged to fulfill the obligations of accepting the nuclear warheads for the Canadian NATO and NORAD systems. The solution to this seems quite simple in this instance. A change in government in a state does not indicate that there is a change in the state itself. This means that an obligation undertaken internationally is one obligating the state and not the ruling head of state, whether it be in the form of a monarch, dictator, president or even an assembly. In the Tinoco Concessions,[74] reference is made to a quotation from Moore's Digest of International Law.

> Changes in the government or in the internal policy of a State do not as a rule affect its position in international law. A monarchy may be transformed into a republic or a republic into a monarchy; absolute principles may be

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[74]The Tinoco Concessions (1923) 1 U.N. Reports of International Arbitral Awards 369 Great Britain-Costa Rica Arbitration, Castel, supra, n. 13, 120-125.

> substituted for constitutional, or the reverse; but, though the government changes the nation remains, with rights and obligations unimpaired. . . .[75]

The indication is then that a change in government only in the sense of the political party which controls the state does not affect the international commitments of that state. Since the obligations are those of the state, they would continue regardless of which political party, assuming it had legitimate control, undertook the obligation and which political party assumed control. There is no question that the Diefenbaker government was legitimately the Government of Canada, so the commitments regarding the nuclear weapons would continue through the change in political control.

There is an interesting conflict in views regarding this principle. Although there is agreement with regard to the principle in general there is a difference of opinion as to what it is that remains constant despite the changes in government. As the above indicates the opinion is that it is the nation or the State which remains. However in the Sapphire[76] the opinion is expressed that it is the national sovereignty which stays constant. This is not a major issue since it must be borne in mind that the Sapphire was decided in 1871 while the Tinoco Concessions took place

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[75] Id., at 121.

[76] The Sapphire, Supreme Court of the United States, 1871 78 U.S. (11 Wall.) 164, Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 200.

52 years later. In any case, the distinction is not critical to this discussion.

It is acknowledged that there has been some criticism of the principle with regard to international obligation.[77] However this criticism is directed at the principle in the context of the appearance of the newly emerging states. The change of government with which we are dealing here is simply a constitutionally valid democratic process within a state.

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[77] See note Id., at 200.

CHAPTER VII

CANADA'S CURRENT NUCLEAR STATUS

Since the issue of Canadian legal obligation with regard to the nuclear weapons controversy is really an academic question due to the Liberal acceptance of the weapons, the next question must be whether the events of the controversy had an effect on Canada's subsequent roles in NATO and NORAD. The perspective for such an examination is from a continued Canadian commitment to the use of the nuclear weapons within the two collective defence arrangements.

1. NATO

There was never any serious question regarding Canada becoming a nuclear country--that is national manufacture and possession of nuclear weapons. This was once again emphasized in the White Paper on Defence, which was issued in March of 1964.[1] However with regard to NATO, the White Paper emphasizes that the question of nuclear weapons for Canada is subordinate to Canada's responsibility to a nuclear-armed military alliance. The conclusion was then that Canada must be prepared to share a part of the burden of NATO, which included nuclear weapons, because it was an inescapable responsibility concomitant with membership in the North Atlantic Alliance.

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[1] Gellner, supra, Ch. IV, n. 2, 75-77.

Canada's nuclear role in NATO was not seriously challenged until France's withdrawal from the NATO Defence Planning Committee. At that point Prime Minister Lester Pearson stated that Canada would "continue to maintain an appropriate contribution to NATO's collective defence system."[2] This statement could have been interpreted as a warning that Canada would be reconsidering what was an appropriate contribution to the alliance. However it seems that even by 1966 the Canadian military contribution to NATO remained substantially the same as it had been a few years earlier.[3]

In 1968 there occurred a change in Canadian policy with regard to NATO. During the 1968 election campaign Prime Minister Trudeau verbalized the feeling that a re-assessment was necessary of Canada's defence policy and priorities. This, by necessity, would include Canada's roles in NATO and NORAD.[4] The culmination of this re-appraisal with regard to the Canadian nuclear contingent to NATO came as a result of the enunciation of the four defence priorities by Prime Minister Trudeau, on April 3, 1969.

In summary, Canada will continue to be a member of the North Atlantic Treaty Organization

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[2]Statement by Prime Minister Lester B. Pearson of the Canadian Government's Position, 4 April, 1966. Id., at 86.

[3]Id., at 88.

[4]Id., at 97-98.

> and to co-operate closely with the United States within NORAD and in other ways in defensive arrangements. We shall maintain appropriate defence forces, which will be designed to undertake the following roles:
>
> (a) the surveillance of our own territory and coast-lines--i.e., the protection of our sovereignty;
>
> (b) the defence of North America in co-operation with United States forces;
>
> (c) the fulfilment of such NATO commitments as may be agreed upon; and
>
> (d) the performance of such international peacekeeping roles as we may, from time to time, assume. . . .[5]

The indication from this statement was that Canada was not placing as high a priority on NATO as had previously been the case.

On September 19, 1969 this change in priorities resulted in the termination of the Canadian nuclear contributions to NATO. The Minister of National Defence, Léo Cadieux, issued the following statement:

> [t]he air element will be a group of three [a reduction from the original six] squadrons of CF-104s, one in the reconnaissance and two in the strike role. The air group will remain under operational command of the 4th Allied Tactical Air Force. The brigade in Germany will drop the Honest John nuclear role when it is reconfigured next year and the nuclear strike role for the air element will continue only until January 1972. . . . For the post-1972 period we plan to equip a land element in Europe, of approximately the same size as the interim group, as a light airmobile force and to convert the air element to a conventionally armed ground support or reconnaissance role.[6]

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[5] Id., at 101.

[6] Id., at 104.

In fact the nuclear strike role was terminated on December 31, 1971 and all three squadrons of CF-104s were refitted and converted into a conventional attack role.[7] Therefore by the first of January, 1972, Canada had discontinued all nuclear participation in the North Atlantic Treaty Organization.

Although the re-evaluation of NATO resulted in a continued commitment to participate in the alliance in order to maintain a stable nuclear deterrence,[8] it was clear that the participation in NATO was to receive lower priority than the protection of Canadian sovereignty and the defence of North America.[9]

2. NORAD

The situation with regard to NORAD is somewhat different. Throughout the political controversy over the nuclear weapons for NATO and NORAD during 1963, general support for NORAD as a collective security arrangement with the United States was maintained.[10] This can be explained by the fact

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[7] Defence 1971, 63 (1972).

[8] Wang, "Sovereignty and Canada-US Co-operation in North American Defence", Macdonald, Morris, Johnston, Canadian Perspectives on International Law and Organization, 861 (1974).

[9] Gellner, supra, Ch. IV, n. 2, 110. NATO has provided a valuable vehicle for Canadian input into the Strategic Arms Limitations Talks between the Soviet Union and the United States as well as the talks on mutual and balanced force reductions (hereinafter referred to as MBFR) in Europe. White Paper on Defence, 35 (1971).

[10] Wang, supra, n. 8, 865.

of the geographic proximity and importance of North American Air Defence as opposed to the relative remoteness of the defence of Europe. Furthermore the fact, that Canadian-American relations are far closer cannot be ignored.

The Canadian commitment, from a nuclear standpoint, to NORAD was not altered much even in 1968 when the NORAD agreement was renewed.[11] It is significant to note that the involvement in NORAD by Canada did change in a negative sense. By this time the topic of anti-ballistic missiles (hereinafter referred to as ABM) had become an issue with regard to the United States. Canada was reluctant to participate in the costly program of ABM defence and this was evidenced in the note from J. M. Leddy on behalf of the U.S. Secretary of State, in which it is stated that the Agreement did not involve Canada in any commitment to participate in ballistic missile defence.[12]

Subsequent to the renewal of the NORAD agreement, the defence priorities were made public by Prime Minister Trudeau.[13] Obviously NORAD would be given greater emphasis than NATO due to the fact that it was the major vehicle through which defence of North America would be carried out. The importance of NORAD can be inferred by the statement of

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[11] Canada Treaty Series 1968/5. The NORAD agreement was extended for a period of five years by an exchange of notes which came into force on March 30, 1968 and became effective on May 12, 1968.

[12] Canada Treaty Series 1968/5, 2

[13] Supra, 138-139.

the government in the Defence White Paper, which stated that

> . . . co-operation [sic] with the United States in North American defence will remain essential so long as our joint security depends on stability in the strategic military balance. Canada's objective is to make, within the limits of our resources, an effective contribution to continued stability by assisting in the surveillance and warning systems, and in the protection of the U.S. retaliatory capability as necessary. Co-operation [sic] between Canada and the US in the joint defence of North America is vital for sovereignty and security.[14]

This commitment to North American defence and therefore NORAD, although quite clear, is still subject to the first of the defence priorities--the protection of Canadian sovereignty. Therefore it is not surprising that it would be Canada's policy that defence activities on Canadian territories will, to the greatest extent feasible, be carried out by members of the Canadian Armed Forces.[15]

The Canadian commitment to NORAD was not made without some re-evaluation of the alliance. During 1969 when the rethinking was taking place by a parliamentary committee, there was no longer unanimity in the support of NORAD. The committee recommended that Canada remain in NORAD without any fundamental changes in commitment but it is noteworthy to mention that one Liberal and three NDP members of the committee recommended Canadian withdrawal from continental bomber defence.

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[14] White Paper on Defence, supra, n. 9, 25.

[15] Wang, supra, n. 8, 862.

Canada did not opt to abandon the bomber defence. However the Bomarc missiles in Canada were felt to have outlived their usefulness and in the White Paper it was announced that they would be retired. The reason for this decision was that there had been considerable changes in the strategic situation. Of importance was the fact that the preponderance of the U.S. second strike capability was located in the mid-western United States, in defence of which the Bomarcs in North Bay and La Macaza were of very little value.[16] The two Bomarc squadrons were phased out of service on September 1, 1972.[17]

However, unlike the situation with regard to NATO, Canada did not choose to totally denuclearize its forces at home. Although the inference can be made that there was that desire, it was decided that the CF-101 Voodoo aircraft would maintain the nuclear capability under the same arrangements with the United States.[18]

NORAD was renewed by an exchange of notes on May 10, 1973 for a further two year period.[19] There was no alteration in the terms of the agreement. This meant that there needed to be another agreement on the extension of NORAD again in 1975. On May 8, 1975, once again by an exchange of

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[16] White Paper on Defence, supra, n. 9, 29.

[17] Correspondence from the Under Secretary of State for External Affairs, dated September 23, 1976.

[18] White Paper on Defence, supra, n. 9, 30.

[19] Canada Treaty Series 1973/17.

notes, NORAD was extended for a period of five years.[20] There still has not been any change in the nuclear status of the Canadian forces.

Canada's role in NORAD is not restricted solely to the nuclear activities. Therefore it is instructive to note that another significant contribution is made through the arrangements of the Ballistic Missile Early Warning System (hereinafter referred to as BMEWS). BMEWS is an early warning communications link which passes through Canada to NORAD headquarters in Colorado Springs, Colorado.[21]

There is one final point with regard to NORAD and nuclear weapons, which merits mention in a survey of Canadian nuclear commitments. This is the fact that U.S. Strategic Air Command aircraft armed with nuclear weapons will be allowed overflight on Canadian airspace while they are on airborne alert in times of crisis. In addition, in those circumstances there may be permission granted for the Strategic Air Command bombers to refuel from tanker aircraft stationed in Canada.[22]

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[20]Department of External Affairs Annual Review 1975, 44 (1976), and Cox, "Requirements of Diplomacy called for renewal of NORAD", 1975 International Perspectives 17.

[21]Wang, supra, n. 8, 867. As well Canada has played a role in anti-submarine warfare. However the Defence White Paper indicated that there would be less emphasis on anti-submarine warfare and that Canada's maritime fleet would concentrate more on maritime roles. Id., at 868.

[22]White Paper on Defence, supra, n. 9, 31.

To summarize Canada's current military nuclear status, it can be simply stated that the only nuclear military capability Canada now possesses is through the CF-101 Voodoo aircraft.[23] This statement must be qualified because the nuclear warheads are subject to the same provisions of American custody and control which were adopted in 1963. The purpose the nuclear armed CF-101s serve in the defence of North America is clearly stated as against the threat of massive nuclear attack.

> Only with such nuclear weapons would they have a reasonable prospect of destroying attacking bombers and their nuclear weapons before the latter were released.[24]

3. The Legal Implications of Canada's Change in Nuclear Status

There is one legal question with regard to the changes in Canada's nuclear commitments. Canada did not renunciate either the NORAD or NATO agreements, when deciding to reduce the Canadian nuclear involvement, but rather simply attempted to modify the terms of its participation. The question is then whether this was done in accordance with standard legal procedures. The simple legal answer is that there is no problem with the Canadian action since the parties to the respective agreements did not object to the changes.[25]

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[23] Supra, n. 17.

[24] White Paper on Defence, supra, n. 9, 31.

[25] Brownlee, supra, Ch. VI, n. 31, 603; Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 406.

Clearly, had there been objection to the changes in the arrangements, which in fact were not a part of the NORAD or NATO treaties but rather arrangements within the collective defence systems, there would then have to be some legal argument. It would seem the argument would have to be similar to that used by the Progressive Conservatives in 1963, which was that there had been a change in circumstances. Obviously the argument in 1963 was not that strong because the government at the time was attempting to use the change in circumstances to get out of all the nuclear commitments. In the present instance the argument is not based on a total abolition of nuclear defence but rather based on a comprehensive revamping of the Canadian defence arrangements.

The doctrine which would have to be relied upon is rebus sic stantibus. Although this rule of international law is founded upon custom[26] and is acknowledged as a current principle of treaty law through the Vienna Convention on the Law of Treaties,[27] there is some hesitation regarding rebus sic stantibus.[28] This is reflected in the strict rules for invoking the principle.

> Article 62 [of the Vienna Convention on the Law of Treaties] states that a fundamental change of circumstances which has occurred with regard to those existing at the time of the conclusion

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[26] Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 419.

[27] O'Connell, supra, Ch. II, n. 72, 278.

[28] Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 418; O'Connell, supra, Ch. II, n. 72, 278.

> of a treaty, and which has not been foreseen by the parties, may not be invoked as a ground for termination or withdrawal unless the existence of those circumstances constituted an essential basis of the consent of the parties, and the effect at the change is radically to transform the extent of obligations still to be performed under the treaty.[29]

If the above criterion were to be applied to the change in circumstances in the early 1970s, it is difficult to determine whether there is sufficient justification for the Canadian position. Clearly the change in circumstances is sufficiently significant to alter the further performance of Canada, in the sense that the technological advances and accompanying alterations in the strategic situation render the three nuclear systems abandoned, of limited value. However the problem with this argument is that it cannot be easily said that these changes were not foreseen by the parties. That being so, rebus sic stantibus would not be available. If one were to use that same argument, it could be said that if the changes were foreseen, it would be unreasonable to believe that the parties to the arrangements would not have impliedly agreed that, should such circumstances arise, it would be necessary to alter the arrangements accordingly.

Since this is a somewhat superfluous argument it will not be pursued further. It should suffice to mention that the Canadian position was not disputed by the other states

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[29] Id., at 278-9.

involved and that Canada gave ample notice of the alterations and showed concern for the possibility of difficulties which could arise in such a transition period.[30]

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[30] Supra, 139; 142-143.

CHAPTER VIII

CANADA'S NUCLEAR WEAPON TREATY COMMITMENTS

Canada has always prided itself in its commitment and active role in the arduous task of achieving a lasting and secure peace through disarmament. Since the Second World War the importance of the pursuit has achieved greater urgency, while at the same time the difficulties of reaching agreement have magnified substantially. The road to nuclear disarmament has only just begun. However there have been some significant developments, in which Canada has played a fairly influential part. The purpose of this section is to survey the treaties and international agreements of a nuclear and military nature to which Canada is a party. The broader implications of these commitments will be discussed from the standpoint of Canadian actions in this area.

1. The United Nations Charter

The first international treaty of significance towards disarmament in the wake of the nuclear age was the Charter of the United Nations. The tenour of the commitment of the nations of the world is established in the preamble of the charter which states that the first of the objectives is "to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind. . . ."[1] The UN Charter is of relevance in the sense

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[1] Charter of the United Nations, Friedmann, Lissitzyn and Pugh, supra, Ch. III, n. 27, 1155.

that it establishes among its Purposes and Principles the maintenance of international peace and security and establishes the principle of collective action for the prevention of threats to the peace of the world.[2]

It is unrealistic to believe that the United Nations has been able to accomplish this objective completely or without any difficulties. However it must also be appreciated that the United Nations has been an important vehicle through which much of the dialogue with regard to nuclear disarmament and arms control has taken place.[3]

2. The International Atomic Energy Agency (hereinafter referred to as the IAEA)

The IAEA is a body formed as a result of a multilateral treaty. The Statute of the International Atomic Energy Agency was opened for signature on October 26, 1956 and it entered into force on July 26, 1957.[4] The Agency is not an integral part or product of the United Nations in a direct sense because it was felt that by doing so the problems

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[2] Id., at 1155-1156.

[3] For example the Baruch Plan was presented to the United Nations Atomic Energy Commission, supra, Ch. III, n. 5. For further examples of the role of the United Nations in the dialogue on disarmament, see, supra, Ch. III, n. 15. The Eighteen Nation Disarmament Committee was the successor to the Ten Nation Committee on Disarmament. Canada was also a member of the Eighteen Nation Disarmament Committee (hereinafter also referred to as the ENDC). See also, Fischer, The Non-Proliferation of Nuclear Weapons, 38-46 (1971).

[4] Szasz, The Law and Practices of the International Atomic Energy Agency, 34, 61 (1970).

associated with the Security Council veto would be avoided.[5] However the IAEA is a part of the United Nations "family". By an agreement between the Agency and the United Nations[6] the terms of the relationship between the IAEA and the UN were spelled out. The United Nations recognizes the IAEA as the agency "responsible for international activities concerned with the peaceful uses of atomic energy in accordance with its Statute"[7] and further that the Agency "will function under its statute as an autonomous international organization in the working relationship with the United Nations."[8]

The purpose of the International Atomic Energy Agency is two-fold:

> . . . to further the peaceful uses of atomic energy throughout the world, and to do so in such a manner that the Agency's assistance is not misused for any military purpose.[9]

The function of the IAEA is basically in the field of peaceful uses of nuclear energy. However there are certain aspects of the Agency which are of relevance to the military use of nuclear power.

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[5] Id., at 71.

[6] Agreement Concerning the Relationship Between the United Nations and the International Atomic Energy Agency. Entry into force on November 14, 1957. U.N.T.S. vol. 281 F. No. 548.

[7] Id., Art. I 1.

[8] Id., Art. I 2.

[9] Szasz, supra, n. 4, 78.

The most significant aspect about the IAEA is that, from a legal point of view, the Statute of the Agency creates no significant rights, duties or obligations for states party to the agreement.

> . . . A State, by becoming a Member of the Agency, does not assume any obligation either to refrain from military nuclear activities or to submit to any control on its peaceful activities. Nor is a Member obliged to refrain from assisting other States (whether Members or not) in conducting military activities or to require that any assistance it grants for peaceful purposes is to be subject to its own or to the Agency's control.[10]

Although this sounds rather foreboding, the Agency is not altogether ineffectual with regards to nuclear activities. In fact, although the Statute establishes very few obligations, it does in practice create a "framework to support the network of agreements through which the organization is to carry out its activities."[11]

The system of IAEA nuclear activities is primarily through the nuclear safeguards. Although the safeguards will be dealt with in detail during the discussion of the Non-Proliferation Treaty, it is relevant to the present topic from the point of view of the purposes of the safeguards. They were designed to prevent the possible abuse of using the nuclear reactors for the production of bombs.[12] It is

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[10] Id., at 329-330.

[11] Id., at 893.

[12] Id., at 356.

questionable as to the applicability of the safeguards to nuclear propulsion devices for vehicles, missiles and naval devices. It is not clear, for example, whether a nuclear propulsion device for a naval vessel would be considered in the class of those things for a prohibited purpose.[13]

Although the purposes of the IAEA seemed extremely useful from the outset, the functioning of the IAEA in its first ten years of existence did not follow the same priorities that were inferred in a reading of the Statute. In order to examine the priorities of the activities of the Agency, one need only examine the proportion of funds budgeted to the various roles the IAEA played during the ten years. The development and application of safeguards, which possibly could have been the major role of the Agency, was only ranked fifth as far as budgetary commitments goes, while technical assistance in the form of the supply of experts and equipment received the largest amounts of money. Research, the distribution of information and the development of health and safety standards were the next three top priority activities of the Agency.[14] The explanations for this different shift in emphasis of the IAEA from that of supplying and safeguarding nuclear materials are not directly of legal

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[13] Id., at 357.

[14] Id., at 359.

interest.[15] However it is interesting to note the fact that the role of the Agency did not follow that which was prescribed for it by the Statute of the Agency.

The final aspect of the International Atomic Energy Agency, which is of interest here, is the role that Canada has and does play in the Agency. The impetus for the formation of the IAEA came basically from the United States and the Soviet Union. However much of the work in the development and creation of the IAEA was done by the Meeting of Six Governments[16] and even more so by its successor the ten nation Working Level Meeting.[17]

To further illustrate the stature of the Canadian actions in the formulation of the IAEA, it can be noted that one of the conditions precedent to the treaty coming into force was ratification of the treaty by three of five countries--Canada, France, the Soviet Union, the United Kingdom and the United States.[18] Although this is of little major significance it does indicate that Canada, even though

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[15]Szasz briefly discusses the reasons for the IAEA's activities. Id., at 360. The primary role of the Agency in the area of safeguards, as will be illustrated, has been encouraged to some extent by the Non-Proliferation Treaty. Infra, 167-174.

[16]The six governments were: Canada, Czechoslovakia, France, the Soviet Union, the United Kingdom and the United States. Szasz, supra, n. 4, 29.

[17]Canada was represented on this body as well. Id., at 31.

[18]Id., at 72.

it was not a nuclear weapon state, was considered an important party to discussions of nuclear energy.[19]

The most important organ of the International Atomic Energy Agency is the Board of Governors.[20] There are two sub-categories for membership on the Board. One of these is called "the five members most advanced" in the technology of atomic energy. From the outset it has been accepted that these are Canada, France, the USSR, the United Kingdom and the USA. None of these states has been challenged or replaced since the IAEA began.[21] Besides serving on the Board of Governors of the Agency since its inception a Canadian has been the Vice Chairman on three occasions and Chairman once from 1957 to 1970.[22]

It is quite clear that despite the fact that Canada has never attempted or had a desire to develop its own atomic weapons, it has been able to maintain a position of influence and importance with regard to the international agency most concerned with the development of nuclear power in the world.

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[19]The major reason for the rather high stature of Canada was surely the fact that Canada was relatively advanced in nuclear technology and was a major supplier of uranium.

[20]Szasz, supra, n. 4, 138.

[21]Id., at 145.

[22]Id., at 1121-1122. As well Canada has served on the IAEA Scientific Advisory Council since the beginning. Id., at 239-240.

3. Treaty Banning Nuclear Weapons Tests in the Atmosphere in Outer Space and Under Water (hereinafter referred to as the Limited Test Ban Treaty)

The Limited Test Ban Treaty[23] is of vital interest in the drive towards disarmament. The terms of the agreement do provide for some provision against furthering the number of nuclear explosions, the prospect of which the world was facing. However, as far as the effects of the treaty with regard to Canadian actions and policies, the treaty has limited application. The reason for this is the fact that Canada has not tested and does not now have any desire to test nuclear weapons. In any case, as will be illustrated, if it so wished there are still options for nuclear testing.

The Limited Test Ban Treaty is a multilateral treaty originating through the agreement of the United Kingdom, the United States and the Soviet Union. Since the agreement was signed by three originating parties, it has been open to all states for their signature. After the announcement of the initialing of the treaty all the political parties in the House of Commons welcomed this step towards the objective of world peace.[24] Prime Minister Lester Pearson assured the House that the Canadian government was ready to become a party to the agreement.[25] In fact Canada did become a signatory to

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[23] Canada Treaty Series 1964/1. The treaty, dated August 5, 1963, was signed by Canada on August 8, 1963 and entered into force for Canada on January 28, 1964.

[24] (1963) 3 H.C. Deb., 2601-2604.

[25] Id., at 2602.

the Limited Test Ban Treaty on August 8, 1963, three days after the signature of the three original parties.[26]

The heart of the treaty is contained in Article I in which each of the parties to the treaty

> . . . undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control:
>
> (a) in the atmosphere; beyond its limits, including outer space; or under water, including territorial waters or high seas; or
>
> (b) in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted. . . .[27]

Article I (2) provides for an undertaking by each of the parties to the treaty not to cause, encourage or in any way participate in the carrying out of any such nuclear explosion. The treaty is of unlimited duration, although there is a withdrawal clause. The provision for withdrawal is that, if in the opinion of a state party to the treaty, extraordinary events related to the terms of the treaty have jeopardized the supreme interest of that state, it may withdraw by giving notice to all other parties to the treaty three months in advance.

Obviously the largest gap in the provisions of the treaty is that it is not a complete ban on nuclear testing.

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[26] Canada Treaty Series 1964/1

[27] Id., at Art. I 1.

There is no provision for the cessation of underground nuclear testing, which has continued to be carried out. There are a number of political reasons for the absence of agreement on underground testing, most notably the difference of opinion between the United States and the Soviet Union on the issue of on site inspections.

A most interesting development in the Limited Test Ban Treaty is the fact that there is no provision for "peaceful" nuclear explosions in the environments prohibited by the terms of Article I. In the draft of the treaty which was tabled at the Eighteen Nation Disarmament Conference in August 1962, there was provision for such "peaceful" explosions, provided there was unanimous agreement to such an explosion by all three original parties and the explosion was carried out in a prescribed manner.[28]

Although the Limited Test Ban Treaty is not of great consequence as far as Canadian international legal commitments with regard to nuclear weapons, it is of relevance for two reasons. The first reason is that Canada by signing and ratifying the treaty has in essence voluntarily restricted the options it can pursue with regard to future nuclear development. This is not crucial because Canada has no desire to detonate a nuclear explosion. However, since the prospects were great for peaceful explosions, acceding to the treaty did actually limit the future course of conduct.

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[28]Terchek, The Making of the Test Ban Treaty, 201 (1970).

The criticism can be made that the peaceful nuclear explosion option is still available because Canada could simply withdraw from the Limited Test Ban Treaty upon three months notice. Also since the terms of the treaty do not deal with underground explosions, the restrictions against underground peaceful explosions do not exist.

The second factor of the Limited Test Ban Treaty, which is of relevance as far as Canada is concerned, is that the treaty was the first breakthrough since 1946 in Soviet-American agreement on the control of nuclear weapons.[29] Although the treaty originated from the United Kingdom, the Soviet Union and the United States, Canada played a role in its formulation, particularly through its membership on the Eighteen Nation Disarmament Committee. The fact that the agreement was viewed as a first step on the road to disarmament is also important from the Canadian viewpoint because of its constant efforts to promote international peace and security.

4. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (hereinafter referred to as the Outer Space Treaty)

An analysis of the Outer Space Treat[30] is very similar to the above consideration of the Limited Test Ban Treaty.

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[29] Dean, Test Ban and Disarmament, 81 (1966).

[30] Canada Treaty Series 1967/19. The treaty was signed by Canada on January 27, 1967 and entered into force on October 19, 1967.

The major similarity between the two agreements is the fact that the provision of the treaties are not vital to the security or conduct of Canada with regard to nuclear weapons.

The spirit of the treaty is apparent from the preamble, which mentions the United Nations General Assembly Resolution of October 17, 1973, discouraging states from placing nuclear weapons or weapons of mass destruction in orbit around the earth or on celestial bodies. In fact the working of Article IV of the treaty is almost identical to that of the resolution.

> States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons on celestial bodies, or station such weapons in outer space in any other manner.[31]

Furthermore the same Article bans the establishment of military bases installations or fortifications, weapons testing or military manoeuvres on celestial bodies.

The similar remark can be made about the Outer Space Treaty as was made with the Limited Test Ban Treaty regarding its importance within the spirit of disarmament. Obviously, Canada, which has a very limited space program and a non-existent national nuclear weapon program is not particularly affected by the terms of the treaty. However the treaty is considered important in the eyes of Canada from the basis of attempting to achieve a peaceful world.

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[31] Id., at Art. IV.

5. Treaty on the Non-Proliferation of Nuclear Weapons (hereinafter referred to as the Non-Proliferation Treaty)

The Non-Proliferation Treaty[32] may be the single most important international agreement with regard to nuclear weapons that Canada has been a party to. Although there are difficulties associated with the treaty, which can be pointed to as illustrative of the impotency of the treaty or the futility of the entire exercise of attempting to achieve peace in the nuclear age, the positive aspects of the treaty must not be overlooked or dismissed as accomplishing very little.

The history of the Non-Proliferation Treaty can be directly attributable to the detonation of the Chinese first atomic device on October 16, 1964. After this the Eighteen Nation Disarmament Committee discussed the topic of non-proliferation. The United States presented a draft of the treaty on August 17, 1965, which, it was intimated, was a result of collaboration among Italy, the United States and Canada. It appears that the Canadian and British representatives had been working on drafts for non-proliferation since early in 1965 and further that separate texts for non-proliferation had been discussed in the North Atlantic Council before the meetings of the Eighteen Nation Disarmament Committee meetings.[33]

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[32] Canada Treaty Series 1970/7. The Non-Proliferation Treaty was signed by Canada on July 23, 1968 and entered into force on March 5, 1970.

[33] Dai, "Treaty on the Non-Proliferation of Nuclear Weapons with Special Reference to Canada's Position", 1968 Canadian Yearbook of International Law 229.

The final draft of the Non-Proliferation Treaty was a product of the work of the Eighteen Nation Disarmament Committee and the Political and Security Committee of the United Nations General Assembly. The treaty was approved by the General Assembly by a vote of 95 in favour, 4 opposed and 21 abstentions.[34]

In an examination of the terms of the Non-Proliferation Treaty it is valuable to begin with the Preamble which sets out the spirit of the agreement. The Preamble mentions the devastation of nuclear war and the belief that the proliferation of nuclear weapons would seriously enhance the dangers of such a war. As well the Preamble deals with the desire to end the nuclear arms race, achieve nuclear disarmament and ease world tensions. The goals and objectives of the parties to the treaty manage to cover all the bases when there is also mention of the dedication to the peaceful uses of nuclear energy and the application of the International Atomic Energy Agency safeguards on these peaceful uses of nuclear energy.[35] Obviously the Preamble is a "motherhood and apple pie" statement of beliefs, but it is important from two aspects. The first is that the IAEA is mentioned and from the outset given a role to play in the safeguards of peaceful uses of nuclear energy.[36] The second aspect stems from the fact that the

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[34] Id., at 230.

[35] Canada Treaty Series 1970/7. 3-4.

[36] This will be dealt with in more detail below. Infra, 167-174.

Limited Test Ban Treaty and the determination to work towards the goal of cessation of all nuclear tests as well as general and complete disarmament are mentioned.[37] The implication can and should be made that the Non-Proliferation Treaty is another international agreement "along the road to disarmament". This is clearly one of Canada's objectives in the area and the advent of this treaty can be construed as a limited success.

Before proceeding further with the treaty it must be explained that the Non-Proliferation Treaty creates two classes of states party to the treaty--a nuclear-weapon state and a non-nuclear-weapon state. The definition of a nuclear-weapon state for the purposes of this treaty is a state which has manufactured and exploded a nuclear weapon or other nuclear device before January 1, 1967.[38] Therefore the number of nuclear-weapon states is exclusive; those states being France, China, Great Britain, the United States, and the Soviet Union. Clearly then there is no question of Canada being included as a nuclear-weapon state because although it had access to nuclear weapons prior to January 1, 1967, it had not manufactured and exploded a nuclear device prior to that date.

An interesting question arises from the implications of the very restrictive definition of a nuclear-weapon state.

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[37] Canada Treaty Series 1970/7. 3.

[38] Id., at Art. IX 3.

If a state, like India for example, which had not signed the Non-Proliferation Treaty and had subsequently detonated a nuclear weapon or nuclear explosive device, decided to become a party to the treaty, what status would it hold with regard to being a nuclear-weapon or non-nuclear-weapon state? It would seem that even though the state had a nuclear weapon capacity in reality, it would have to become a party to the Non-Proliferation Treaty as a non-nuclear-weapon state and assume the responsibilities of such a state under the treaty. The reason for the conclusion is that the definition of a nuclear-weapon state does not contain any provision for any other states gaining the nuclear-weapon status other than those that had the status as of January 1, 1967. The explanation for this must be that had there been any such provision it could be interpreted by states hesitant to sign the treaty as an incentive not to become a party to the treaty until after they had developed their own nuclear weapon capability. The end result would be a treaty which, instead of discouraging nuclear proliferation, would in essence be encouraging states to develop and explode nuclear weapons.[39]

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[39]It is questionable whether a state in the situation described as in the case of India, would be able to sign the Non-Proliferation Treaty as a non-nuclear-weapon state because of the provision of Article II. Infra,166. Unless the state decided not to possess, acquire or manufacture any further nuclear weapons or nuclear explosive devices there would be no possibility of the state becoming a party to the treaty with the intention of fulfilling the obligations imposed by the agreement.

Article I of the Non-Proliferation Treaty outlines the obligations of nuclear-weapon states party to the treaty. The essence of the duty of the nuclear-weapon states is an undertaking

> . . . not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly, and not in any way to assist, encourage, or induce any non-nuclear-weapons State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices.[40]

Basically by the provisions of this article the nuclear-weapon states have only given up the right to transfer nuclear weapons to any "recipient whatsoever", which would include any international organization or any other nuclear-weapon state, as well as any non-nuclear-weapon state, whether party to the treaty or not. In addition nuclear-weapon states party to the treaty promise not to induce any non-nuclear weapon states (whether or not party to the treaty) to manufacture or acquire the proscribed nuclear weapons or explosive devices. Upon analysis the criticism can be levied that the nuclear-weapon states are really giving up nothing because they had no intention of transferring nuclear weapons to non-nuclear-weapon states.[41] However the nuclear-weapon states party to the treaty[42] do forego the option of transferring

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[40] Canada Treaty Series 1970/7. Art. I.

[41] Fischer, supra, n. 3, 67.

[42] Great Britain, the United States and the Soviet Union.

nuclear weapons to such regional organizations as NATO[43] or even an agency like the United Nations.

Article II is of greater relevance to the discussion because it deals with the undertakings of the non-nuclear-weapon states, of which Canada is one. Each non-nuclear-weapon state party to the treaty is obliged not to receive the transfer of nuclear weapons or explosive nuclear devices, not to manufacture or acquire, or seek or receive any assistance in the manufacture of nuclear weapons or other explosive nuclear devices.[44] The undertaking of the non-nuclear-weapon states under the Non-Proliferation Treaty involves a much greater sacrifice than that of the nuclear-weapon states. The implication is that Canada, by acceding to the treaty, has pledged for as long as the treaty may be in effect and Canada has not exercised the right of withdrawal,[45] not to manufacture or in any way acquire nuclear weapons or other explosive nuclear devices.

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[43]It is precisely this fear of the USSR that NATO would become a nuclear weapon alliance and that Germany would, through NATO, obtain such weapons. Dai, supra, n. 33, 231. However this does not include the current arrangements for nuclear weapons supplied by the United States to NATO allies, such as Canada. Infra, 175-176.

[44]Canada Treaty Series 1970/7, Art. II.

[45]The withdrawal clause is contined in Article X 1, which requires three months notice and a statement of extraordinary events which the state feels have jeopardized its supreme interests. The treaty shall continue for 25 years, at which time a conference shall decide if it is to be extended indefinitely or for fixed periods of time. Id., at Art. X 2.

It is interesting that there is no provision prohibiting a non-nuclear-weapon state from assisting a nuclear-weapon state in the development or manufacture of a nuclear weapon or nuclear explosive device. Canada, being a large producer and exporter of uranium can be classed in this situation. However, since 1965 it has refused to sell uranium except by means of contracts covered by clauses on peaceful uses and control.[46] France, not a party to the Non-Proliferation Treaty, resists international controls and Canada therefore refused to supply it with uranium or plutonium. A compromise was reached in 1968 when Canada supplied France with plutonium under a 1959 agreement between EURATOM and Canada. The EURATOM controls would apply to the transfer.[47]

Article III of the Non-Proliferation Treaty provides for additional obligations, especially with regard to the non-nuclear-weapon states. This is the section of the treaty which provides for an important role to be played by the IAEA. Each of the non-nuclear-weapon states party to the treaty undertakes to accept safeguards with the IAEA

> . . . for the exclusive purpose of verification of the fulfilment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices.[48]

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[46] Fischer, supra, n. 3, 60.

[47] Id., at 85.

[48] Canada Treaty Series, 1970/7, Art. III 1.

As well all non-nuclear-weapon states promise to conclude safeguard agreements after that date with the IAEA, with negotiations of which must begin within 180 days of the original entry into force of the treaty or immediately upon accession to the treaty.[49] Article III goes one step further in imposing the requirement for IAEA safeguards by providing that no party to the treaty will transfer fissionable material or equipment for production of such material to any non-nuclear-weapon state for peaceful purposes unless the source or special fissionable material is subject to the requisite safeguards.[50]

There are two further provisions in the treaty which bear mention in the context of this discussion. Article V provides for the possibility of peaceful nuclear explosions. Under appropriate international observation and supervision the benefits of peaceful nuclear explosions shall be made available to non-nuclear-weapon states party to the treaty without discrimination and at as low a charge as possible.[51]

This means that should Canada desire such a use of nuclear energy there would be no legal impediment for such action. However there is one difficulty regarding this provision. The treaty mentions specifically international observation and following international procedures as two of the prerequisites for the availability of peaceful

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[49] Id., at Art III 4.

[50] Id., at Art. III 2.

[51] Id., at Art. V.

nuclear explosions to non-nuclear-weapon states. It is not clear whether the nuclear explosion would be carried out by an appropriate international body (the IAEA) or by one of the nuclear-weapon states. If it is the latter there is no difficulty as long as there is international observation and the proper procedures are followed. If, on the other hand the international agency were entirely responsible for the explosion it would appear that it would be in violation of this treaty. It is doubtful that the IAEA or any other such international organization would be capable of developing or willing to develop its own nuclear explosive capability, so the likely alternative would be to obtain a nuclear device from one of the nuclear-weapon states. However the difficulty arises from Article I of the treaty which forbids the transfer of nuclear explosive devices to "any recipient whatsoever". Therefore the state which provided the device to the agency would be in breach of its commitments under the treaty. This point is not that serious since it would be likely that the procedure followed would be the first one mentioned where a nuclear-weapon state would conduct the explosion under the supervision and guidance of the international agency.

The final provision of the Non-Proliferation Treaty which bears mention at this time is the undertaking of the states to pursue negotiations in good faith toward the cessation of the nuclear arms race at an early date.[52]

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[52] Id., at Art. VI.

Further, the article mentions the goals of nuclear disarmament and a treaty for general and complete disarmament with strict and effective controls.[53] Once again this is evidence of the lofty objective of peace in the world to which Canada is committed and has attempted to play an important role. The ability of Canada to be involved in the disarmament negotiations has to a large extent been facilitated by its involvement in the development and progress of the use of nuclear energy. As has been illustrated it is likely that Canada would not have served on the large number of nuclear disarmament and control agencies and committees had it not had the nuclear technology and raw materials.

One of the obvious concerns of non-nuclear-weapon states considering becoming a party to the Non-Proliferation Treaty is that, by so acceding, they could easily become subject to threat of nuclear attack or blackmail by other states. In order to allay such drawbacks to the widespread acceptance of the treaty the United States, the Soviet Union and the United Kingdom have offered security guarantees for assistance to non-nuclear-weapon states in repelling nuclear aggression. This was formalized through a motion in the Security Council on June 19, 1968. This move is not vital to the security of Canada, since it has its own form of protection through a close alliance with the United States, but it was welcomed by Canada as a most positive step.[54]

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[53] Id.

[54] Dai, supra, n. 33, 236-237.

There are some difficulties with the Non-Proliferation Treaty. Some of these have been mentioned above.[55] It is not possible to deal with all of the difficulties involved with the treaty with regard to the discussion at hand;[56] so for expediency the examination will focus on some of the difficulties associated with the Non-Proliferation Treaty and the role of the International Atomic Energy Agency.

The Non-Proliferation Treaty specifically makes mention of the role the IAEA will be performing with regard to safeguards of peaceful nuclear activitities.[57] It was foreseen that the Non-Proliferation Treaty would become the principal basis on which the IAEA would impose future safeguards.[58] It certainly seemed likely that the advent of the Non-Proliferation Treaty would certainly provide the necessary catalyst to increase the IAEA's activities in the area of safeguards.

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[55] Supra, 167-169.

[56] Some of the problems associated with the Non-Proliferation Treaty, which are not included in this discussion are: the fact that the treaty does not give a definition of nuclear weapon, see Fischer, supra, n. 3, 56-57; the great difficulty in the fact that there is no control over non-nuclear-weapon states which are not party to the treaty, see Id., at 60; and the treaty makes no provisions regarding vertical as opposed to horizontal proliferation of nuclear weapons, see Dai, supra, n. 33, 231-232. The vertical proliferation issue has been somewhat alleviated by the SALT agreements.

[57] Supra, 160; 168.

[58] Szasz, supra, n. 4, 357.

However the "marriage" of the Non-Proliferation Treaty and the IAEA raises some interesting questions. The first issue is whether the IAEA under different safeguard agreements can enforce safeguards for different purposes. Szasz points out that although it was possible the Agency refrained from such an endeavour by requiring all states, no matter the method of seeking safeguards, to give an undertaking which was analagous to the formula in the Statute of the Agency. By this method, the enforcement of controls managed to be quite standard. However with the additional input of the Non-Proliferation Treaty and controls thereunder

> . . . this solution will probably not be possible, for the specific proscriptions in that instrument are so well defined and appear to express a dominant international purpose which cannot lightly be varied for the convenience of the Agency.[59]

A second question deals with the issue of activities which are clearly peaceful. The major concern of the IAEA is to ensure that the peaceful activities of the states are not diverted to military purposes. However the question arises as to whether the IAEA can deter clearly peaceful activities, like a peaceful nuclear explosion, through the use of its safeguards because the Non-Proliferation Treaty has forbidden the activity since it is the feeling that the ability to conduct a peaceful nuclear explosion cannot be separated from the ability to produce nuclear weapons? The answer to this is yes. Justification can be found in the IAEA's

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[59] Id.

obligation to conform with international agreements which are in keeping with the policy of the United Nations to strive for general and complete disarmament with strict and effective controls.[60]

Since the IAEA is primarily concerned with peaceful activities, there seems to be a gap with regard to military nuclear activities. Therefore it would be logical to discuss whether the IAEA may apply its safeguards to military activities in order to ensure that there is no breach of conditions under the Non-Proliferation Treaty. The activities which could be included in this category would be things like nuclear-powered military vehicles, which obviously are not nuclear weapons or nuclear explosive devices. It would seem that the IAEA would be able to extend the use of its safeguard systems to cover military nuclear activities to ensure that the terms of the Non-Proliferation Treaty are complied with. The same reasoning may be applied to this instance as was employed in the previous question. Szasz also points out that the Agency may be able to apply its safeguards to an activity which is not "peaceful" in order to prevent its use for a "military purpose" within the definition given under the treaty.[61]

A further problem with the incorporation of the

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[60] Id.

[61] Id., at 357-358. Szasz is relying on the ambiguity of the definition of "non-peaceful" as opposed to "military purposes". See Id., at 352-353.

Non-Proliferation Treaty and the IAEA safeguards arises from the fact that the standard IAEA safeguards prohibit some activities which by the terms of the Non-Proliferation Treaty can be viewed as acceptable.[62] Since the non-nuclear-weapons states party to the treaty must conclude agreements with the IAEA for safeguards,[63] there could arise conflicts as to whether the state would be obliged to agree to be subject to the more restrictive IAEA safeguards or whether the more liberal terms of the Non-Proliferation Treaty should be the ones complied with. There is no simple solution to this problem unless the states, concluding such safeguard agreements with the Agency, do not object to the standard safeguards because it appears that the Agency does not wish to modify its position.[64]

The Non-Proliferation Treaty is of particular relevance to Canada in two rather distinct areas.[65] The first is that Canada has often been pointed to as a good example of a state which has progressed significantly in the scientific

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[62] Id., at 567. In order to conclude a safeguard agreement with the Agency the state, subject to the safeguards, must undertake not to employ certain things in a way so as to further any military purpose. Id., at 568. However the Non-Proliferation Treaty prohibits activities only in relation to nuclear weapons or other nuclear explosive devices. Supra, 165.

[63] Supra, 168.

[64] Szasz, supra, n. 4, 568.

[65] This is ignoring the safeguard aspects and the renewed vigour of the IAEA as it concerns Canada and the sale of CANDU reactors.

and technological aspects of nuclear power despite the fact that it has no nuclear weapon industry; or even exploded a nuclear device.[66] In fact Canada objected strongly to any suggestion that peaceful nuclear explosions might be permitted among non-nuclear-weapon states on a national basis. General E. L. M. Burns pointed to the fact that Canada had not been impeded in its progress in the field of nuclear power despite the fact that it had not detonated a nuclear explosion. Further he illustrated the Canadian position in this regard by saying:

> [i]n our view, a treaty permitting non-nuclear-weapon states to conduct, on a national basis, nuclear explosions for peaceful purposes, would contain a substantial loophole. We believe that it is impossible to distinguish between the technology required in nuclear explosions for peaceful as against military purposes and that a non-nuclear-weapons power which detonated a nuclear explosive device, no matter for what purposes would, in effect have taken a decisive step towards the production of nuclear weapons.[67]

The second important aspect of the Non-Proliferation Treaty with regard to Canada deals with the effect of the treaty on Canada's nuclear status, particularly with regard to the nuclear weapons in Canada as a part of the NORAD arrangement. The position, which the United States and the Soviet Union agreed upon, appears to allow such an arrangement as Canada has with nuclear weapons. The interpretation of

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[66] Fischer, supra, n. 3, 108.

[67] Dai, supra, n. 33, 233. General Burns was Canada's chief representative at the ENDC negotiations for the Non-Proliferation Treaty.

Articles I and II, which the United States gave to the Soviet Union, stated that the terms of the treaty do

> . . . not deal with arrangements for deployment of nuclear weapons within allied territory as these do not involve any transfer of nuclear weapons or control over them unless and until a decision were made to go to war, at which time the treaty would no longer be controlling.[68]

The important part of the American argument, which was accepted by the USSR is that the nuclear weapons, although on the territory of a non-nuclear-weapon state, are not transferred to that state because they are still in American custody and control.

Further to the question of control, it is the view that Canada can still maintain a veto on the firing of such nuclear weapons and not be in breach of the provisions of the Non-Proliferation Treaty. The logic of the argument is that a veto is not the "affirmative and final decision-making power which constitutes control for the purposes of Articles I and II"[69] of the treaty.

It can be concluded that the Non-Proliferation Treaty does not impose any undue or harsh terms on Canada with regard to nuclear weapons. In fact the argument can be made that although Canada has given up the right to develop nuclear weapons, or nationally explode its own nuclear device, since

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[68] Bunn, "Horizontal Proliferation of Nuclear Weapons", Boskey and Willrich, Nuclear Proliferation: Prospects for Control, 32 (1970).

[69] Id., at 34.

it had no desire to pursue that route at any time, the sacrifice is minimal. This is especially obvious when the fact that Canada may still possess nuclear weapon capability through the CF 104s and is definitely under the American nuclear "umbrella" for defence and security.

6. Treaty on the Probition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof (hereinafter referred to as the Sea-Bed Treaty)

The Sea-Bed Treaty[70] can be considered as another multilateral agreement within the spirit and intent of nuclear arms control for the world. The relevance of the treaty to the Canadian situation in any direct sense is somewhat limited because Canada has no intention of acquiring and, through the Non-Proliferation Treaty, has pledged not to acquire nuclear weapons. However, as has been mentioned with many of the above agreements the treaty is important to Canada from the standpoint of its desire and continual striving for agreements for the peace and security of the world.

The treaty itself provides for an undertaking by all states party to it not to emplant or emplace on the sea-bed and ocean floor outside of the sea-bed zone any nuclear weapons or other weapons of mass destruction. This also

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[70] Canada Treaty Series 1972/20. The treaty entered into force for Canada on May 18, 1972. For a discussion of the Canadian contribution to the Seabed Treaty, see Purver, "Canada and the Control of Arms on the Seabed", 1975 Canadian Yearbook of International Law 195.

includes structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons. There is a further undertaking of the states party to the treaty not to assist, encourage or induce any state to do any of the activities forbidden above and not to participate in any other way in such activities. The sea-bed zone mentioned above is exempted only for the coastal state or the sea-bed beneath its territorial waters.[71]

The outer limit of the sea-bed zone is defined as the 12 mile outer limit of the zone referred to in the Convention on the Territorial Sea and the Contiguous Zone. The measurement of this zone is to be in accordance with the terms of the Convention and International Law.[72] Presumably then if the Convention on the Territorial Sea and the Contiguous Zone were to be amended to extend the outer limit of the territorial sea, the outer limit of the sea-bed zone would be extended accordingly.

An interesting aspect of this treaty is the verification provisions.[73] Each state party to the treaty has the right to verify that the activities of another state party to the treaty are in accordance with the terms of the treaty in any area of the sea-bed and ocean floor except the sea-bed zone of a coastal state. This verification must be through

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[71] Id., at Art. I.

[72] Id., at Art. II.

[73] Id., at Art. III.

observation and must not interfere with the activities of the state in question. There are further provisions for action should such observation leave reasonable doubt regarding those activities.[74]

As has become the custom in treaties of this nature, there is an undertaking by the parties to continue negotiations in good faith for disarmament; in this case of the sea-bed and the ocean floor.[75]

The Sea-Bed Treaty is, in a sense, quite important to Canada from the perspective of its assertion to sovereignty over its coastal waters.[76] Since the sea-bed zone is exempted from the provisions of the treaty and Canada has a vast territorial sea, there is tremendous potential for the exploitation of the above exemption. However Canada is not likely to be placing nuclear weapons on the sea-bed zone. Despite that fact, this treaty does indirectly reinforce the claims of sovereignty over Canadian coastal waters.

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[74] See Id., at Art. III 2, 3, 4.

[75] Id., at Art. V. As well the treaty contains what has become the standard withdrawal clause requiring three months notice and a statement of the extraordinary events which the state withdrawing considers to have jeopardized its supreme interests. Id., at Art. VIII.

[76] This is evidenced by the actions Canada has taken regarding the Arctic waters and recently regarding the 200 mile offshore fisheries jurisdiction.

CHAPTER IX

CONCLUSION

The effects that the advent of the nuclear age have had on civilization have not crystallized to the point that any real evaluation can possibly be made. Although the threat of nuclear war has retarded mankind's proclivity to large-scale war, there have still occurred a number of "minor" skirmishes, which have caused tremendous loss of life and suffering. Although the development of nuclear energy has been foreseen as a saviour for the future energy shortage, there is the possibility that this source of energy could cause the death of thousands.[1]

The verdict on nuclear technology has yet to be made. The jury has not gone into final deliberations and so it is still possible that the future of mankind can be determined. Canada is in this very situation. The nuclear future of this country is still in the hands of the Canadian policy makers.

Canada has played a significant role in the development of the nuclear "balance of terror". Through the participation in the Combined Policy Committee and its functions, Canada has contributed to the initiation of the world into nuclear weapons and the possibility of nuclear warfare. Furthermore the supply of uranium, plutonium and

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[1] See generally, Knelman, supra, Ch. I, n. 4 and Olson, Unacceptable Risk (1976).

other fissionable materials have in effect placed this country in the position of being a "pusher" of nuclear material. There is no question that Canada has not and does not wish to develop nuclear weapons, but the fact that it has supplied the United States, Great Britain and France with the material necessary to develop, refine and stockpile nuclear weapons does not speak well of the dedication to the philosophy and reality of disarmament.

Canada has also set a less than desirable example to the non-nuclear weapon states of the world by the method in which it acquired a nuclear arsenal. Once again there is no question of the admirable objective of disarmament but there is some incongruity with regard to the fact that while on one hand Canada can speak of the evils of nuclear proliferation and rely on its virtuous record of not producing a nuclear explosive device, despite having the expertise and resources to do so, on the other hand have on its soil nuclear weapons which in certain circumstances it could choose to employ against an enemy. Many nations of the world do not have the fortune to be able to acquire the nuclear military capability by virtue of their geographic location and the auspices of the American nuclear umbrella.

Canada's contribution to nuclear weapons goes further, in a very real but indirect sense. Through the sales of CANDU reactors Canada, at the very least is contributing to what is quickly becoming a plutonium economy throughout the world. An argument can be made that through the spread of nuclear reactors around the world the nuclear weapon

capability is at the same time being proliferated. India has shown the world that such a proposition is in fact true. Pakistan, also a state which received Canadian nuclear aid, has begun to advance similar rhetoric with regard to the peaceful purposes of their nuclear processing plant, now under construction. This may or may not result in another nuclear country; but the simple possibility of such an event plays heavily on the minds of the world's leaders.

Canada has been and continues to be a vocal and dedicated participant in the disarmament attempts. Not only does it involve itself in the many international disarmament organizations and conferences but its influence is also evident in such disarmament talks as SALT, which is only a bilateral discussion between the Soviet Union and the United States.

It can be pointed out that Canada is the only state of the three which worked on the atomic project during the war which has not utilized the technology it obtained in order to develop its own nuclear military capability. This may not be considered such a great step towards disarmament. However it is somewhat important for two reasons. The first is that the decision was made and has been continually supported despite the occasional but vocal calls for Canadian independence from the domination of the United States.

The second reason is that this Canadian abstention exemplifies the fact that a state need not develop any nuclear explosive capability to successfully pursue a program

of nuclear energy for domestic peaceful purposes. The advantages in economic terms, assuming the intent is purely for domestic energy, are tremendous.

In addition the Canadian leadership towards the goal of disarmament is most admirable in the area of safeguards for nuclear reactors. Despite the relative failure of the London group of nuclear suppliers to reach agreement on adequate safeguards and the limited powers accorded to the IAEA in the execution of safeguards, Canada has unilaterally invoked the most stringent safeguard requirements of any of the supplier states. Although criticism has been directed at the requirements to the effect that they do not go far enough, it can certainly be said that at the very least they are a positive step towards achieving a desirable result.

The two seemingly divergent positions of Canada's nuclear role create a dilemma. It does not appear that the contribution towards the proliferation of nuclear weapons and the leadership in and dedication to disarmament can really be reconciled. There is little doubt that the antithesis of the two aspects of the nuclear commitments may be satisfied by practical exigencies such as the need for security and defence of North America. Therefore the explanation would be that although there is a definite commitment to the ideal of disarmament, the importance of a sovereign state's responsibility to defend its territorial integrity and the lives of its citizens cannot be overlooked or neglected.

However, it is also apparent that the difficult objective of disarmament is not productively served by any contributions to the nuclear military capabilities of any and all states in the world. If Canada wishes to aid in the achievement of one or the other of the sides of its nuclear "coin", there must be a conscious policy decision to conduct its international obligation in that direction. The decision as to which road to follow is not an easy one. Clearly the road to disarmament is fraught with difficulty and perplexity, while at the same time is morally and ideologically attractive. A peaceful international situation has been an ultimate goal for many years and Canada has been one of the most vocal and devoted advocates. However the present situation with regard to nuclear weapons has its attractions. Every state has the duty to defend its territory and population. The current arrangement provides Canada with a nuclear weapon capability that is relatively inexpensive as an integral part of the North American defence system. This is important especially when it is considered that Canada would be in the collision zone in the event of a Soviet-American military confrontation. The difficulty in selecting and following one of the policies is that it can and will create situations to which there is no easy answer. Prime Minister Trudeau expressed the importance of not depriving the developing states of the advantages of nuclear energy.

> It would be unconscionable under any circumstances to deny to the developing countries the most modern of technologies as assistance in their quest for higher living standards.

> But in a world increasingly concerned about depleting reserves of fossil fuels, about food shortages, and about the need to reduce illness, it would be irresponsible as well to withhold the advantages of the nuclear age--of power reactors, agricultural isotopes, cobalt beam-therapy units.[2]

However the possibilities of nuclear weapons proliferation and the accompanying chances of nuclear war may well be considered equally unconscionable.

It was not the purpose of this thesis to predict the future course of Canada's international legal obligations with regard to nuclear weapons, nor was the purpose to proselytize in an attempt to endorse either of the alternatives. The object was to illustrate the dilemma, and through an understanding of the background and influential factors involved in this complex problem, hopefully some way can be found so that the nuclear age can be brought to serve instead of destroy mankind.

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[2] Epstein, supra, Ch. I, n. 2, 41.

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APPENDIX A

Replying on 28 May, LaBine gave Howe "a brief review of the contracts we have on hand at present":

"1. Contract dated December 21, 1942 covering the refining of approximately 655 tons of ore, apparently of Belgian origin. This contract was supplemented on April 14, 1943, to cover an additional 600 tons of U308.

"2. Contract dated July 16, 1942 covering 350 tons of U308 from Eldorado ore, to be delivered in the form of Black Oxide. To date, approximately 185 tons have been delivered against this contract and the balance is to be delivered after the treatment of the ore under contract (1) has been completed.

"3. Contract dated December 22, 1942 covering 500 tons of U308 in the form of Black Oxide, from Eldorado ore, for delivery after completion of the two contracts above, but before December 31, 1944."

APPENDIX B

Dear Gilbert:

Re: Uranium Oxide

I authorized you some days ago to ship the 15 tons of Eldorado oxide to the United States rather than to England. I have now cleared this with the British authorities, and think that you can now continue to ship to the United States rather than to England, until I notify you further.

The British desire to have 3 tons purified by the Mallinckrodt process and returned to Canada by March 1st, 1943, and also wish to make provision that 5 tons of Mallinckrodt material shall be reserved for England, pending the clearing up of the British requirements. It is my understanding that the 5 tons is an outside figure, and that the actual requirement will probably be less.

I assume that the shipments to Canada and to England above mentioned have been cleared by W. A. Akers, representing the [United Kingdom] High Commissioner, and Dr. [Arthur H.] Compton of Chicago, representing the U.S. user. However, I suggest that you notify your customer in the United States that all Uranium oxide produced by your Company can be shipped to him, subject to return shipments of Canadian and British requirements above stated.

I trust that this letter will throw some light on the requirements position.

APPENDIX C

Articles of Agreement Governing Collaboration between the Authorities of the U.S.A. and the U.K. in the matter of Tube Alloys

Whereas it is vital to our common safety in the present War to bring the Tube Alloys project to fruition at the earliest moment; and whereas this may be more speedily achieved if all available British and American brains and resources are pooled; and whereas owing to war conditions it would be an improvident use of war resources to duplicate plants on a large scale on both sides of the Atlantic and therefore a far greater expense has fallen upon the United States;

It is agreed between us

First, that we will never use this agency against each other.

Secondly, that we will not use it against third parties without each other's consent.

Thirdly, that we will not either of us communicate any information about Tube Alloys to third parties except by mutual consent.

Fourthly, that in view of the heavy burden of production falling upon the United States as the result of a wise division of war effort, the British Government recognise that any post-war advantages of an industrial or commercial character shall be dealt with as between the United States and Great Britain on terms to be specified by the President of the United States to the Prime Minister of Great Britain. The Prime Minister expressly disclaims any interest in these industrial and commercial aspects beyond what may be considered by the President of the United States to be fair and just and in harmony with the economic welfare of the world.

And Fifthly, that the following arrangements shall be made to ensure full and effective collaboration between the two countries in bringing the project to fruition:

(a) There shall be set up in Washington a Combined Policy Committee composed of:

The Secretary of War	(United States)
Dr. Vannevar Bush	(United States)
Dr. James B. Conant	(United States)
Field-Marshall Sir John Dill, G.C.B., C.M.G., D.S.O.	(United Kingdom)

Colonel the Right Hon. J. J. Llewellin,
C.B.E., M.C., M.P. (United Kingdom)
The Honourable C. D. Howe (Canada)

The functions of this Committee, subject to the control of the respective Governments, will be:

(1) To agree from time to time upon the programme of work to be carried out in the two countries.

(2) To keep all sections of the project under constant review.

(3) To allocate materials, apparatus and plant, in limited supply, in accordance with the requirements of the programme agreed by the Committee.

(4) To settle any questions which may arise on the interpretation or application of this Agreement.

(b) There shall be complete interchange of information and ideas on all sections of the project between members of the Policy Committee and their immediate technical advisers.

(c) In the field of scientific research and development there shall be full and effective interchange of information and ideas between those in the two countries engaged in the same sections of the field.

(d) In the field of design, construction and operation of large-scale plants, interchange of information and ideas shall be regulated by such ad hoc arrangements as may, in each section of the field, appear to be necessary or desirable if the project is brought to fruition at the earliest moment. Such ad hoc arrangements shall be subject to the approval of the Policy Committee.

APPENDIX D

(a) Make no increase at this time in the present facilities for heavy water.

(b) Continue the present programs at Chicago and Montreal for the development of fundamental information on heavy water piles.*

(c) Undertake the design and construction of a heterogeneous heavy water pilot pile in Canada, as a joint American-British-Canadian project.

(d) When adequate information has been obtained, or when the performance of the pilot plant is known, consider the design, construction, and location of a single heterogeneous heavy water pile of about 50,000 K.W.

(e) Review the situation when the performance of the first large scale graphite pile at Hanford becomes known.

(f) Set up an organization to supervise the pilot pile project.

(g) Strengthen the Montreal Laboratory by the inclusion of American scientists as well as British and Canadian scientists and the appointment of a Director.

*The Americans were themselves building an experimental heavy-water pile at Argonne near Chicago and were holding back heavy water for use in it. It was some time before the British and Canadians were allowed to know about these things.

APPENDIX E

Before any sound policy, national or international, can be laid down in respect of the development, manufacture, and use of atomic energy for warlike purposes, the following assumptions must be confirmed.

1. That the atomic bomb is not merely a new weapon in a long succession of weapons, since man first began to fight with clubs, but something revolutionary and unprecedented, a new departure in destruction and annihilative in effect.

2. That the Atomic bomb dropped on Japan, if development is not controlled, is only the beginning, not the end, of the use of atomic energy for destruction; that even more devastating bombs are being or could be developed which will be to the present bomb as a machine gun is to a breech-loader.

3. That the secret of the atomic bomb cannot be kept and that within, say, five years a country like USSR will know all about it.

4. That the manufacture of the atomic bomb is possible in any individual state which knows the secret.

5. That projection by rockets with accuracy over great distances is now or will shortly be possible . . .

It is assumed that the above statements are substantially true. If this assumption is correct, then no government has the right to give its people a feeling of security, which can only be false, by basing its policy on the opposite assumption, that a national or three-country monopoly of development and production is possible. Even if, for some years at least, such a monopoly <u>were</u> possible, its value to enforce peace would not be great because other countries would know perfectly well that Anglo-Saxon public opinion would not permit the aggressive or even preventive use of such a terrible weapon.

It follows, therefore, that any constructive solution of this problem of the war use of atomic energy, must be international--not national. There is, in fact, no national solution.

This does <u>not</u> mean that the three countries concerned should make a gift of their atomic knowledge to other countries without conditions. That would be folly. It means that they should exploit the temporary advantage they now possess in order to bring this weapon under international control, so that it can never be used by anyone. This can be attempted

by trading the knowledge of invention and manufacture they alone possess at present, for renunciation by all nations of the right of production or use, except, possibly, on orders from the United Nations. This in its turn means international supervision and control of the development and use of atomic energy. If an honest offer of this kind, made by the United States, United Kingdom, and Canada, were refused by any other state, that refusal would certainly disclose which nations were to be trusted and which feared.